SFUND RECORDS CTR 1316-00360

Coast Wood Preserving Ukiah, California

Second 5-Year Review

January 15, 2001 Revised August 15, 2001



Esperi



Mr. Patrick Lee
Department of Toxic Substances Control
700 Heinz Avenue, Suite 200
Berkeley, CA 94710

Dear Patrick:

Enclosed is a copy of the revised Second 5-Year Review of the Coast Wood Preserving site in Ukiah, CA. This review replaces the draft 5-Year Review sent to Mr. Mark Piros by Mr. Gene Pietila of Coast Wood Preserving by letter of 15 January, 2001, and reflects changes made as a result of discussions with Mr. Piros and Ms. Goebels. The specific changes are described below. Please return or discard the former report and use this review instead.

The most significant changes are in Table 6, the proposed monitoring program for future activities at the site. The present program reflects the desires of DTSC and the Water Board in the wells and frequencies to be utilized. This monitoring program is also consistent with the recently-approved work plan for abandonment of select monitoring wells at the site.

The other change is in the historical data base, Table 3 and Appendix A. We found that some of the reports by former workers on site did not include the year, but rather either did not enter a year, or showed "00" for the year. Our computer database picked up this as 2000, when in fact most of the data was early in the 1980 decade. Where possible, those samples were updated to the correct year. In some cases, the sample data had to be deleted, as it was not possible to determine with certainty the correct year for the sample collection.

Very truly yours,

Montgomery Watson Harza

Jim V. Rouse

CC:

Janice M. Goebels
David Stensby
Bob Schmidt (2 copies)
Gene Pietila
Rick Thomasser



COAST WOOD PRESERVING SECOND 5-YEAR REVIEW

January 15, 2001 Revised August 15, 2001

Prepared for:

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Project Manager



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Coast Wood Preserving, Inc.

Pressure Treated
 Forest Products

 Custom Treating

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Post and Poles

California Environmental Protection Agency Department of Toxic Substances Control Attn: Mark Piros 700 Heinz Ave. Berkeley, California 94710

January 15, 2001

Dear Mr. Piros:

Coast Wood Preserving (CWP) is pleased to transmit the enclosed 5-Year Review report dated January 15, 2001. This report was prepared by Montgomery Watson at the request of Coast Wood Preserving. The report reviews the progress of groundwater remedial actions to date and specifically during the last 5 years.

Groundwater remedial activities have included groundwater extraction and reuse and most recently (since September 1999) in-situ reduction and fixation of chromium.

If you have any questions or comments regarding this report, please call either Bob Schmidt at (209) 632-9931 or me at (707) 468-0141.

Sincerely,

Gene Pietila

Manager

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1.0 INTRODUCTION

Coast Wood Preserving, Inc. (CWP) has operated a wood preserving facility at the intersection of Taylor and Plant Roads in Ukiah, California (Figure 1) (the site) since 1971. These operations have resulted in chromium impacts to soil and shallow ground water underlying the facility. Since June 1980, a number of studies have been conducted to investigate the presence of chromium contamination in the subsurface environment at the site (Figure 2). Table 1 provides information on the monitoring wells installed at the CWP. In 1983, CWP installed a slurry wall to contain the chromium-impacted ground water, and began a program of extraction and reuse of the ground water collected upgradient of the slurry wall. These actions were formally approved as remedial actions in 1989. In 1999, amendments to the remedial action were proposed and approved as described below. This document presents the second 5-year review of the remedial action program at the site.

1.1 Remedial Action Plan

Remedial actions at the CWP site were described in the "Remedial Action Plan (RAP)" prepared by Geosystem Consultants, Inc. (Geosystem), (Sept. 1989) and approved by the State of California, Department of Toxic Substances Control (DTSC). The RAP specified control of site runoff and the capture of ground water through wells HL-7, near the slurry wall, and CWP-18, located in the vicinity of the plant. Recovered water and contaminated storm-water runoff was used as plant makeup water, to the extent possible, with excess water stored and treated by electrochemical methods and re-injected into the ground water. For several years thereafter, ground-water monitoring has been conducted at the site, including water-level measurements and the collection of ground-water samples for chemical analysis. These activities were designed to generate data for evaluating the effectiveness of conventional remedial activities at the site, performed in accordance with the requirements of Order 94-63 by the California Regional Water Quality Control Board (CRWQCB), North Coast Region.

1.2 RAP Amendment

CWP submitted a "Proposed Amendment to the Remedial Action Plan" (the RAP Amendment) (Montgomery Watson, May, 1999) which proposed enhancements to the remedial program at the site, based on technological advancements since the original RAP was approved. These enhancements involve the use of an innovative *in situ* reduction and fixation approach for

chromium (Figure 3). The RAP Amendment was approved by DTSC in July 1999. The CRWQCB approved Waste Discharge Requirements Order No. 99-45 on July 21, 1999 authorizing the proposed *in-situ* reduction program and establishing new ground-water monitoring and sampling requirements (Table 2). The revised ground-water monitoring and sampling began in the fourth quarter of 1999. The orders and permits issued by governmental agencies required the conduct of a one-year annual review of the remedial activities under the amended RAP. This one-year review was prepared by Montgomery Watson and submitted on January 12, 2001 in combination with the Fourth Quarter and Annual Report for 2000.

2.0 BACKGROUND

Reviews of the effectiveness of remedial actions are required by CERCLA Section 121c, NCP Section 300.400 fii, and OSWER Directives 9355.7-02, to ensure that a remedial action remains protective of public health and the environment and is functioning as designed. Five-year reviews such as this become a part of the site file. The first 5-year review was conducted by DTSC and issued December 26, 1996. This second 5-year review has been prepared by Montgomery Watson upon the request of Coast Wood Preserving, for submission to the DTSC. As stated above, a separate one-year review, which is combined with the Fourth Quarter and Annual Report, has been prepared by Montgomery Watson (January 12, 2001) and specifically addresses a review of recent *in-situ* remediation, as required by conditions of the RAP Amendment.

2.1 Site Description

The site is located on the west side of Taylor Road and south of Plant Road, on the southern side of Ukiah, California. It is located in the Ukiah Valley, a north-south trending alluvial basin formed by the Russian River drainage system. Alluvium of Recent age has been deposited along the river valley, and ground water in the alluvium generally drains into and supports base flow of the Russian River.

Timber preservation activities have been conducted continuously at the site since 1971, using an acidic solution of sodium dichromate, copper sulfate and arsenic acid. Since 1980, CWP has made numerous facility improvements including berm construction, grading, roof construction and paving to minimize the formation of runoff contaminated with drippage from treated wood,

and to control such runoff as it occurs. Since 1983, CWP has conducted a number of remedial activities to improve the quality of ground water under the site. Since September 1999, CWP has further conducted innovative *in-situ* remediation of ground-water contamination using a direct-push hydrofracture injection of reduced sulfur solutions to reduce and immobilize chromium in the subsurface. Timber preservation activities continue at the site, with no plans to cease operation in the foreseeable future.

2.2 Geohydrology

The RAP presents a discussion of regional and site geology and hydrology, with detailed maps and cross sections. The following is a brief summary of the site geohydrology, abstracted from the RAP with modifications based on drilling subsequent to the preparation of the RAP.

Ground water beneath the site is recharged to the saturated zone by the infiltration of precipitation and flows to the southeast to east, to support base flow in tributaries of the Russian River. The saturated zone is comprised of unconsolidated material ranging from clay to gravel. Geosystem (September 1989) divided the unconsolidated material in the subsurface under the CWP site into four zones. Zone 1, extending from the surface to a depth of approximately 20 feet, consists primarily of silty clay, clayey silt, and clayey sand, with more permeable stringers and lenses of sand and gravel. Zone 1 is the zone of existing chromium contamination. The lower boundary of Zone 1 was considered to be a very stiff blue silty clay to clayey silt layer, typically four to five feet thick. It was noted in the RAP that the blue clay was absent in some locales. Subsequent drilling by Fluor Daniel GTI in the installation of wells CWP-101 and CWP-102 (Montgomery Watson, September 9, 1999) also failed to encounter the blue clay at the anticipated depths, indicating it was not as laterally consistent as earlier believed.

Zone 2 consists of a sand and gravel layer approximately five to ten feet in thickness. Zone 2 decreases in thickness to the southeast, and is discontinuous off site. Minor contamination has been noted in Zone 2. Zone 3 is a stiff olive brown clayer silt at the lower boundary of Zone 2. This zone was considered by Geosystem to be four to six feet in thickness. Zone 4 is a clayer sand and gravel stratum that underlies Zone 3. Few borings reach Zone 4.

2.3 History

Coast Wood Preserving began wood preserving operations using chromated copper arsenate (CCA) for preservation of wood at the Coast site in 1971. On January 31, 1972, the county raised questions about the possible discharge of CCA preservatives via runoff of rainwater. This was documented on February 23, 1972 by the California Department of Game and Fish, which notified the CRWQCB that preservation material was being discharged into tributaries of the Russian River. Waste abatement orders were issued in 1972 to control such contamination. In January 1973, CWP complied with orders to pave the site.

H. Esmaili & Assoc. (August 1981) installed a series of monitoring wells at the site, identified as CWP-1 through CWP-6. By April 1981, results were available which identified that there was ground-water contamination by chromium underlying the CWP site. In October 1981, CWP installed extraction wells CWP-7, CWP-8, and CWP-9. In November 1981, the CRWQCB installed off-site monitoring wells FPT-1, FPT-2 and FPT-3, which confirmed off-site migration. In August and September 1982, Kleinfelder Associates installed additional monitoring wells CWP-10 through CWP-16. In December 1982, Kleinfelder submitted a report on ground-water monitoring at the site. In June 1983, CWP installed off-site wells FPT-4 and FPT-5. Kleinfelder installed off-site monitoring wells AT-1 through AT-3 off site in September 1983. In March 1984, D'Apolonia conducted soil borings S-1 through S-26 on the site, and reported results in May 1984. D'Apolonia also installed deep boring S-27 and converted it to deep monitoring well CWP-17 in January 1985. Additional monitoring wells CWP-18 through CWP-21 were constructed in August 1985.

All of these data were utilized by Geosystem (March 31, 1986) to prepare an "Evaluation of On-Site Ground Water Extraction". Geosystem (September 1989) subsequently issued the Remedial Action Plan. The RAP, described above, included:

- Paving of exposed soil to prevent infiltration and leaching of chromium from contaminated soils into ground water,
- On-site treatment of contaminated soils using best available technology upon termination of wood treating operations at the site,
- Hydraulic control of impacted ground water by means of extraction wells,
- Electrochemical treatment of extracted ground water,
- Reuse, recycling or reinjection of treated ground water,
- Ground-water monitoring to ensure the effectiveness of the remedial measures.

Many of the features of the RAP were already completed prior to the issuance and approval of the RAP. The site was paved by 1981 and canopies constructed in 1985 to prevent rainfall contacting freshly-treated wood. Dedicated drip-pad equipment was used to further prevent spread of contamination.

As mentioned above, the first five-year review of the site was issued by the DTSC, on December 26, 1996. This review described the implementation and success of the various measures to that date. The review noted a period of non-compliance during 1993 to 1995, due to the inability to reuse or re-inject all the extracted ground water, and the subsequent cessation of pumping for a short period. The review noted that monitoring data showed a decline in chromium concentration in on-site wells and that off-site wells were below the MCL of 0.05 mg/l, as a result of the actions taken by CWP, such as the construction of the slurry wall and ground-water withdrawal.

2.4 Contaminants of Concern

Chromium, resulting from the release and migration of hexavalent chromium contained in wood treating solution, is the primary contaminant of concern at the site (Geosystem, September 1989). Chromium primarily has two valence states in the natural environment. Trivalent chromium is naturally occurring in soil and rock material. At near-neutral pH conditions, trivalent chromium forms a low-solubility hydroxide, which tends to sorb onto natural soil material and be immobilized. Hexavalent chromium is present in industrial process chemicals such as wood-treating solution as the chromate or dichromate anion, and has a high solubility in ground water over a wide range of pH conditions. Hexavalent chromium can be reduced to the trivalent form by reducing conditions, such as are generated by anaerobic bacteria, and by reaction with naturally-occurring reductants such as ferrous iron, reduced sulfur species such as sulfides, or organic carbon (Palmer and Puls, October 1994).

The existing database on chromium concentrations in ground water at the site is primarily in the form of dissolved chromium, as determined by analysis of the total chromium concentration in samples filtered before laboratory analysis. At normal pH values, this would essentially be equivalent to the concentration of hexavalent chromium, because of the low solubility of trivalent chromium hydroxide (Palmer and Puls, October 1994). As described in later sections, some wells which have been impacted by the injection of alkaline reductant solutions do contain dissolved

chromium, apparently in the form of dissolved trivalent chromium solubilized by the elevated pH conditions which temporarily occur in the ground water in the area of reductant injection.

The California and US Environmental Protection Agency (Federal)Drinking Water Standards are currently set at 0.05 and 0.1 mg/l, respectively, on the basis of total chromium concentrations; however, these standards are developed in recognition of the low mobility of the trivalent form.

Arsenic is also a component of the timber preservative solutions; however, geochemical interactions with the site soil have immobilized the arsenic within the upper portions of the soil. As a result, the arsenic is generally not mobile in the ground water and was not considered as a contaminant of concern, during the RAP preparation.

The presence of chromium in site soils at concentrations in excess of 100 mg/kg and of arsenic at concentrations above 15 mg/kg was addressed in site soil investigations (D'Appolonia/IT, May 1984) and in the RAP (Geosystem, 1989). Soil remediation in the RAP was deferred until facility closure, at which time final actions are to be determined.

3.0 SITE CONDITIONS

Initial conditions at the CWP site are described in some detail in the RAP (Geosystem, September, 1989). Subsequent changes in conditions are described in a series of annual monitoring reports submitted by CWP to regulatory agencies and as discussed below.

3.1 Monitor Well Evaluation

As described in an earlier section, the monitoring well network at the CWP site consists of numerous wells, installed by CWP and its consultants, in addition to wells installed by state agencies, over the period from 1981 to 1999. Table 1 provides information on the depth, diameter, and construction of the existing wells.

The means of drilling, the depths of completion, and the materials of construction vary widely, with some of the "wells" actually consisting of pipes installed into gravel-filled back-hoe trenches. Many of the wells were constructed before there was a complete understanding of site geohydrology and contaminant distribution. As a result, there are wells currently in existence

which are not needed for monitoring the ground-water conditions at the site. Such wells, especially those that are off site, offer a possibility for ground-water contamination, either by accidental releases or by activities of vandals, and are not needed for future monitoring. Recommendations for modification to the monitoring system are contained in Section 6.0.

3.2 Ground Water Remediation

Initial remediation of ground-water contamination was accomplished by means of a pump & treat system, with ground water extracted from the saturated zone and either used for make-up water within the CWP plant or treated and reinjected to the subsurface. Since September 1999, remediation has been accomplished by means of an innovative system of *in-situ* geochemical reduction and fixation. These ground water remedial actions are further described below.

3.2.1 Pump & Treat System

The control of the spread of ground-water contamination at the CWP site was accomplished from before the date of the RAP until September 1999 by means of the extraction of ground water from well CWP-18, located near the drip pad, and HL-7, a pipe installed in a gravel-filled trench immediately up-gradient of the slurry wall near the east side of the CWP property. Such efforts were successful in preventing off-site migration of chromium in excess of California MCL values, and were conducted as specified in the RAP.

The effectiveness of the system for remediation of the on-site contamination was limited by the low permeability of the site subsurface, especially in Zone 1. Recovery rates were low, and the effectiveness was further limited by seasonal fluctuations in water levels. High water levels leached mobile chromium from near-surface soils, and low water levels resulted in the stranding of contamination in interstitial moisture in the vadose zone after water levels declined. The lack of significant remedial progress is illustrated by chromium concentrations in monitoring wells such as CWP-6, which showed little change over years of pumping (Table 3). This has proven typical for many pump & treat systems throughout the nation.

3.2.2 In-Situ Reduction and Fixation

The above shortcomings of the pump & treat system were recognized by CWP, after the installation and initial operation of the system. New technology subsequently became available and proven which would be more effective at remediation of chromium contamination in the saturated zone. CWP sought to use this new technology to meet agency goals for amending remedial actions to:

"bring past decisions into line with the current state of knowledge with respect to remediation science and technology, and by doing so, improve the cost effectiveness of site remediation while ensuring reliable short and long term protection of human health and the environment" (Environmental Protection Agency, 1996).

CWP submitted a "Proposed Amendment to the Remedial Action Plan" (Montgomery Watson, May 1999) for modification of the RAP, using technology which had been proven after the approval of the RAP. As noted above, the RAP Amendment was approved by the relevant agencies in July 1999.

The technology enhancement chosen for the CWP site was *in-situ* reduction of the hexavalent chromium to the trivalent form, using direct-push hydrofracture techniques to generate subhorizontal fractures to allow the spread of polysulfide reductant between injection points along a series of injection lines across the plume area. The technology and the results have been described in more detail in a separate one-year review document, prepared to fulfill the requirements of the RAP Amendment (Montgomery Watson, January 2001). Areas of reductant injection are shown on Figure 3.

3.3 Soil Contamination

As noted in the first five-year review, no remediation of soil contamination was anticipated until after closure of the wood treating activities at the CWP site, at which time treatability studies are to be conducted by CWP for the selection of technologies. The RAP recognized that such closure was at least 10 years from the 1989 date of the document. At present, CWP has no plans for cessation of wood-treating activities at the site.

As described in a later section, CWP has recently conducted additional sampling activities which aid in understanding the nature of chromium mobility in the unsaturated soil. This involved the installation and sampling of a series of pressure-vacuum lysimeters at three locations within the area of soil contamination, to determine the true mobility of hexavalent chromium. Experience at other CCA wood treating sites (Rouse and Davies, December 2000) has shown such lysimeters to be effective in evaluating the mobility of chromium in soil, as well as the effectiveness of *in-situ* soil remediation approaches. Data generated by the lysimeters will be useful in conduct of the treatability studies required to be conducted at the time of closure of the CWP facilities. The contact of reductant solution with contaminated soil (through seasonal ground water fluctuations), together with reduced infiltration through improved paving, will minimize leaching of chromium from the soil.

3.4 Areas of Non-Compliance

The initial 5-year review noted that CWP was generally in compliance with the terms of the RAP except for a period from early 1994 to June 1995, during which time pumping of contaminated ground water was not conducted.

Following the date of the first 5-year review, CWP has generally been in compliance with the RAP and the subsequent amendment. A routine program of paving and pavement repair has done much to reduce possible infiltration of contaminated runoff, especially considering the capping of the wood-storage area on the drip pad. No issues of non-compliance are known.

4.0 PROGRESS SINCE LAST 5-YEAR REVIEW

There has been significant progress toward remediation of ground-water contamination at the CWP site since the date of the first five-year review (DTSC, January 26, 1996), as discussed below.

4.1 Pump & Treat System Operation

Operation of the pump & treat system by CWP became more routine and matured after the date of the first five-year review. The monitoring of the system was conducted by CWP personnel, with regular evaluations conducted by outside consultants. For example, Geological Technics, Inc

(February 10, 1999) prepared an annual report on the monitoring for 1998. The report showed that pumping from HL-7 influenced ground-water flow. Water-quality sampling showed the continued presence of chromium contamination on site, at concentrations up to 20 mg/l in well CWP-6, near the drip pad, but no off-site contamination in excess of the MCL of 0.05 mg/l for chromium. There was some evidence of minor contamination down-gradient of the slurry wall but remaining on the site, apparently as a result of migration of chromium prior to the construction of the slurry wall, perhaps further caused by pumping from a well (CWP-8) located down-gradient of the trench having caused contamination to migrate under the trench.

4.2 In-Situ Reduction

The conduct of the *in-situ* remediation was accomplished during two periods, September 13-21, 1999 and April 11-13, 2000. The injection had almost immediate results. Since that time, there has been a significant decrease in the dissolved chromium contamination in the saturated zone.

Table 3 provides water-quality data by date and well across the CWP site for the period January 1996 to December 2000. Appendix A provides the entire ground water monitoring database. The water-quality improvement is clearly shown by Figure 4, which is a plot of chromium concentration in selected wells, as function of time, from the original detection of chromium in the ground water through the approval and initiation of the *in-situ* fixation approach in September 1999. As described in the Remedial Design, the dissolved chromium concentration in well CWP-6, near the drip pad, ranged up to 89,000 ug/l during the period from January 1986 through January 1998. The highest concentration of chromium during 1999, immediately prior to the first program of reductant injection, was 28,000 ug/l. As shown on Figure 4, dissolved chromium concentrations exhibited a sharp drop almost immediately after direct-push injection, in contrast to the lesser change that resulted from earlier efforts at ground-water remediation through withdrawal. During 2000, no sample has exceeded the MCL for chromium in well CWP-6. Similar behavior is shown for other wells at locations throughout the plume.

Examination of the data presented in Table 3 shows that virtually all the monitoring wells yielded samples with dissolved chromium concentrations less than the California MCL of 0.05 mg/l for chromium during the October 2000 annual sampling event. The exceptions include well CWP-102, a deeper well, and wells CWP-2 A&B, that have apparently not been influenced by reductant injections, as well as wells CWP-103, CWP-104, and CWP-6, all of which have elevated pH and obvious polysulfide influence. The chromium in the high pH wells is likely due to the elevated

pH, and the solubility of trivalent chromium at such pH values. The November and December monthly sampling of well CWP-6 yielded chromium results less than the detection limit of 0.01 mg/l.

Both arsenic and manganese show greatest mobility under slightly reduced conditions (Lawrence, Gooddy, Kanatharana, Meesilp, and Ramnarong, 2000). Thus, the generation of a reduced environment, required for the *in-situ* reduction of hexavalent chromium, often results in the temporary increase of these two elements in solution, as they are leached from the aquifer solid material. These elements may not be from site contamination, but rather from the native soil materials. This effect is primarily noted in those wells with high pH and obvious polysulfide presence, described in the chromium discussion above. Geochemical data and experience at other sites shows the mobilization of these two elements is a temporary feature, and that concentrations decline rapidly after the geochemical conditions become more stabilized.

The data (Table 3) show that both arsenic and manganese was, in fact, mobilized in the ground water as a result of the generation of a reduced environment. In some cases (e.g., wells CWP-8, CWP-14, CWP-18, HL-7) the concentrations have already shown a significant decline, with arsenic showing the first decline, followed by manganese. This pattern of immobilization is anticipated to continue with time. No off-site migration is anticipated, as the geochemistry at the perimeter of the treated area will result in the immobilization of both elements.

4.3 Soil Contamination Evaluation

Evaluation of soil contamination was accomplished by means of core sampling at a number of sites (Esmaili, 1981, Kleinfelder, 1982, D'Appolonia / IT, May 1984). During these efforts, core samples were collected and submitted to the analytical laboratory for determination of chromium content. Such an evaluation includes a total of three components of soil concentration:

- 1. Metals initially present at the time of soil deposition,
- 2. Metals sorbed onto soil material, of varying mobility, and
- 3. Metals dissolved in the interstitial moisture of the core.

Typical laboratory analyses dry the soil sample, resulting in the metals in soil moisture being coated onto the soil material, followed by a digestion process to dissolve the total metal content of the solid material. In the subsurface environment, only the metal dissolved in the interstitial fluids is readily available for migration into the ground water. The D'Appolona effort also

included a synthetic leaching protocol on select samples, to attempt to determine the leachability of the metals from the core material.

Work at similar wood preservation sites in other locations (Rouse and Davies, December 2000) has shown there is poor correlation between total core results and the concentration of metals in interstitial fluids, as determined by collection and analysis of pore-water samples collected by means of pressure-vacuum lysimeters.

To evaluate the mobility of chromium in the subsurface, three clusters of pressure/vacuum lysimeters were installed. Two of these clusters (LY-2 and LY-3) were located outside the area of known ground-water contamination, but as described above were within an area previously shown to exhibit elevated chromium contamination in shallow soil, while cluster LY-1 was adjacent to the drip pad in an area of known ground-water contamination. Analysis of core collected at the time of lysimeter installation revealed that the soil contained chromium concentrations ranging from 41 to 73 milligrams per kilogram (mg/kg) at locations LY-2 and LY-3. Near the drip pad area, soil samples contained marginally higher concentrations ranging from 65 to 91 mg/kg. Table 4 summarizes the results of soil core samples collected during lysimeter installation. Table 5 provides data on samples collected from the pressure / vacuum lysimeters. The data show there is mobile chromium contamination in unsaturated material at sites LY-1 and LY-2, but not at location LY-3.

5.0 ASSESSMENT OF REMEDY PROTECTIVENESS

Five-year review documents are for the purpose of assessing the protection of human health and the environment afforded by a remedial program. Such assessment may be accomplished by answering three questions (U.S. Environmental Protection Agency, October 1999):

- 1. Is the remedy functioning as intended by the decision documents?
- 2. Are the assumptions used at the time of remedy selection still valid?
- 3. Has any other information come to light that could call into question the protectiveness of the remedy?

Each of these questions is addressed below.

Is the remedy functioning as intended by the decision documents? The original RAP anticipated that pumping could be accomplished from the saturated zone at sufficient rate to accomplish removal of contaminated ground water and replacement with clean ground water from surrounding areas. In fact, there was insufficient flow, and chromium contamination, which had previously sorbed onto aquifer solids, desorbed in response to equilibrium conditions. Typical sites commonly require the exchange of many pore volumes of water before the result is acceptable. Low permeability material limits the ability to achieve such exchange of multiple (commonly up to 50) pore volumes.

The amended remedial activities, involving *in-situ* reduction, were designed to overcome the limitation on permeability by the generation of secondary permeability, in the form of sub-horizontal fractures, to allow the migration of reductant solution to areas radially distant from the injection points. The reductant then diffuses between the fractures, and the generation of reduced conditions promotes the growth of micro-organisms capable of reducing chromium and other reducible ions such as sulfate and ferric iron.

Are the assumptions used at the time of remedy selection still valid? In-situ remediation was dismissed by Geosystem as unproven at the time of the RAP preparation, but has since been used in a number of sites, with varying geohydrological conditions. These modified assumptions were used in the design of the RAP Amendment, and are still valid.

Has any other information come to light that could call into question the protectiveness of the remedy? The information on the mobility of arsenic and manganese was recognized at the time of the RAP Amendment. Since that time, experience at other sites and at the CWP site demonstrates the temporal nature of the mobilization. No off-site migration is anticipated, and the on-site mobility is expected to decline with adjustments to site geochemistry. The only wells with significant arsenic or manganese mobility, and with continued high chromium concentrations, are those wells with the obvious presence of high concentrations of polysulfide reductant.

In summary, the original design of the RAP was valid for remediation and control of off-site contamination of the shallow ground water, but was unable to address the remediation of the on-site ground-water contamination. The RAP Amendment activities have resulted in significant improvement to on-site ground-water quality and appear valid for long-term remediation.

6.0 RECOMMENDATIONS

6.1 Monitoring

The monitoring well network at the CWP site consists of numerous wells, installed by CWP and its consultants, in addition to wells installed by state agencies, over the period from 1981 to 1999. Table 1 provides information on the depth, diameter, and construction of the existing wells. The means of drilling, the depths of completion, and the materials of construction vary widely, with some of the "wells" actually pipes installed into gravel-filled back-hoe trenches. Many of the wells were constructed before there was a complete understanding of site geohydrology and contaminant distribution. As a result, there are wells currently in existence which are not needed or are redundant for monitoring the ground-water conditions at the site. Since pumping has ceased, the existing ground-water gradients, and hence ground-water velocities, have decreased, which reduces the need for such frequent sample collection. Table 6 contains a recommended program of future ground-water monitoring to assure the protection of human health and the environment, at the same time providing a more focused monitoring program to monitor future remedial progress.

6.2 Well Abandonment and Construction

Certain wells, especially those that are off site, offer a possibility for ground-water contamination, either by accidental releases or by activities of vandals, and are not needed for future monitoring. Table 6 provides a listing of wells that are not presently required for monitoring to protect human health and the environment and should be abandoned in accord with applicable agency requirements. The table also provides rationale for the recommendation. As noted above, several of these wells are presently on the approved schedule for monitoring, which must be modified before well abandonment.

An additional cluster of 2 monitoring wells is recommended in the area of lysimeter cluster LY-2, south of the western tank farm, to evaluate the impact of existing soil contamination on ground-water quality in this area. Prior soil sampling indicates the presence of possible deep soil contamination from a past pipeline rupture. A single well is also recommended midway between the LY-2 location and existing wells CWP-101 and CWP-102.

6.3 Additional Ground-Water Remediation

The most recent monitoring data, as contained in the 2000 annual report and one-year review document (Montgomery Watson, January 12, 2001) show a significant reduction in the extent and magnitude in chromium concentration, as a result of the two events of reductant injection, with only wells CWP-2 A&B, CWP-102, CWP-103, and CWP-104 in excess of the chromium remediation goal of 0.05 mg/l in the most recent samples. The injection has resulted in the mobilization of manganese and arsenic from the native soils, but this is anticipated to be a temporary feature and not to move off site. Based on these data, no further active ground-water remediation is recommended at this time. Rather, it is recommended that ground-water monitoring be continued, at the revised frequency and locations specified in Table 6. Monitoring will include chromium, manganese and arsenic as potentially mobile metals.

6.4 Soil Remediation

No remediation of soil contamination was anticipated until after closure of the wood treating activities at the CWP site, at which time treatability studies are to be conducted by CWP for the selection of technologies. The RAP recognized that such closure was at least 10 years from the 1989 date of the document.

The *in-situ* remediation of chromium in the saturated zone is anticipated to have beneficial results on soil contamination, by contacting contaminated soil with reductant solution during periods of high water-table elevations, and by generation of reduced conditions in the saturated zone, to reduce hexavalent chromium which might be mobilized by infiltration of precipitation. In addition, additional paving, and routine pavement repairs, conducted over the past 5 years, are anticipated to reduce the potential migration of chromium from the soil into the ground water.

CWP has recently conducted additional sampling activities which aids in understanding the nature of chromium mobility in the unsaturated soil. This involves the installation and sampling

of a series of pressure-vacuum lysimeters at three locations within the area of soil contamination, to determine the true mobility of chromium. Experience at other CCA wood treating sites (Rouse and Davies, December, 2000) has shown such lysimeters to be effective in evaluating the mobility of chromium in soil, as well as the effectiveness of *in-situ* soil remediation approaches. Future investigations of soil contamination and remediation should include additional lysimeter sampling to supplement conventional core sampling.

Treatability studies, as required in the RAP, should largely be on a field pilot scale, and should evaluate the feasibility of *in-situ* reduction of chromium in the unsaturated zone. Such reduction does not alter the total contaminant concentration in core, but does minimize the component actually mobile under real-world conditions. Such soil reclamation has been conducted at wood-preservation sites in Granger, Indiana and Mt Gambier, South Australia by the percolation of reductant solution from the surface and the immobilization of chromium in the soil above the water table, combined with paving to reduce infiltration of precipitation.

7.0 PROTECTIVENESS STATEMENTS

Based on monitoring data collected over the past five years, it appears the remedial efforts at the CWP site have been and are protective of human health and the environment.

The pump and treat efforts, which continued until September 1999, prevented the off-site migration of chromium and reduced the concentration of chromium in the ground water on site. Subsequent *in-situ* reduction has been highly effective in reducing hexavalent chromium to the trivalent form and causing the fixation of the trivalent chromium hydroxide onto subsurface material, except in areas where concentrated calcium polysulfide remains in the subsurface. In these areas, elevated pH values cause trivalent chromium to be soluble and be detected in monitoring wells. Arsenic and manganese are also soluble under such conditions. No off-site migration of manganese or arsenic is anticipated, due to geochemical interactions with subsurface material and the consumption of excess polysulfide.

The existing monitoring program is more than is required to assure the continued protection of human health and the environment, and is recommended for reduction by the appropriate agencies.

8.0 NEXT REVIEW

The next 5-year review is currently scheduled for submission in January 2006. Based on the present success at the site, it is anticipated the ground water will all meet cleanup goals before that date. Soil remediation will not be conducted until after the closure of the CWP site, unless it is shown that such remediation can be achieved through *in-situ* techniques while the plant is operating.

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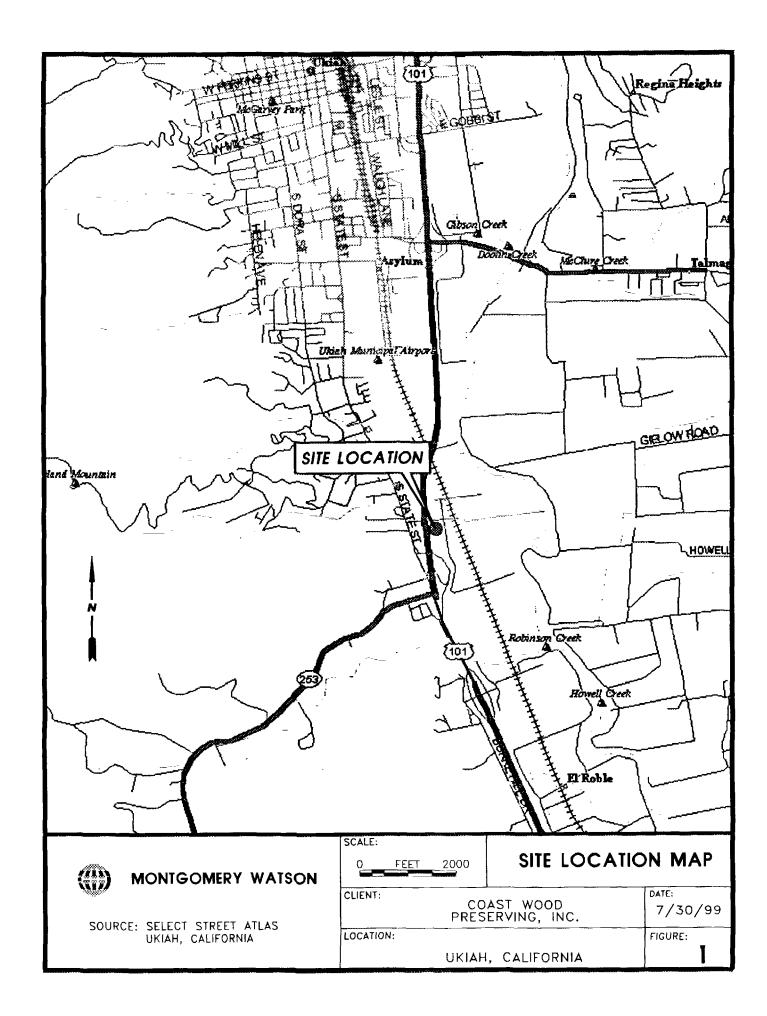
Figures

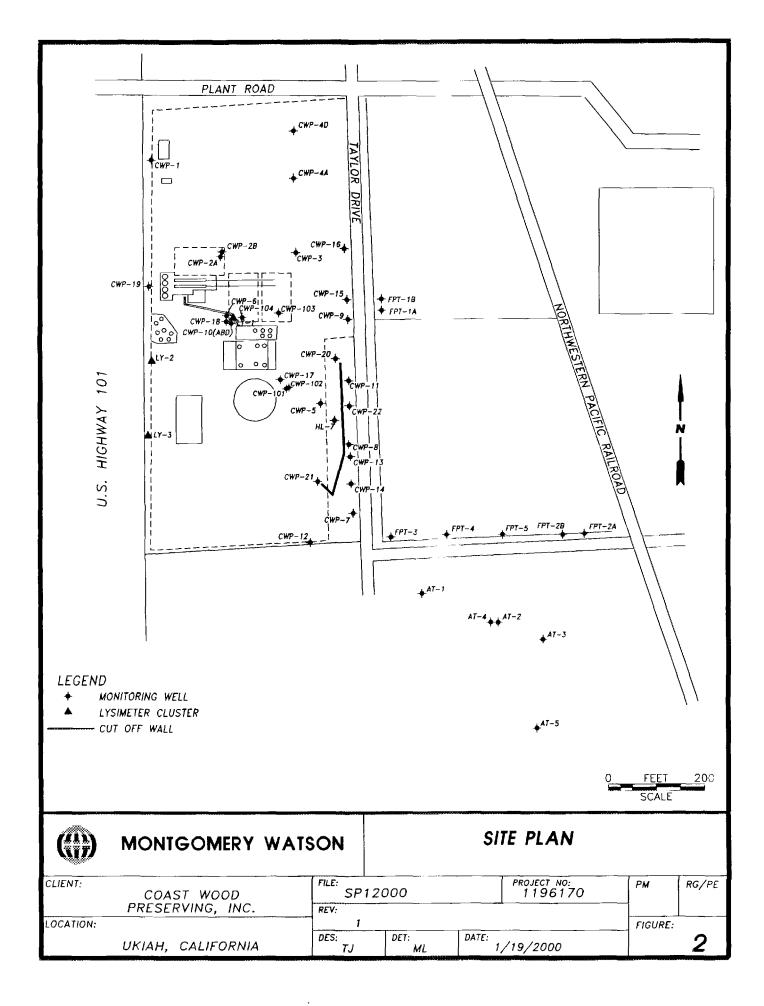


FIGURES

Figure 1	Site Location Map
Figure 2	Site Plan
Figure 3	In-Situ Reduction Program Injection Transect Locations
Figure 4	Dissolved Chromium vs. Time in Representative Wells

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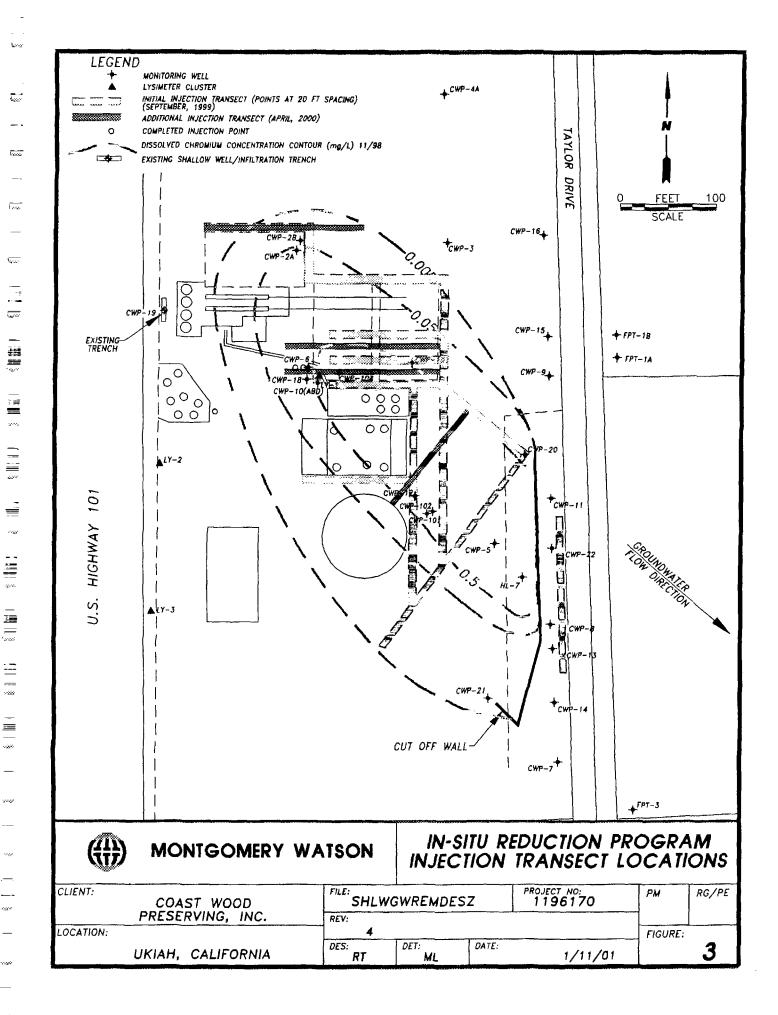
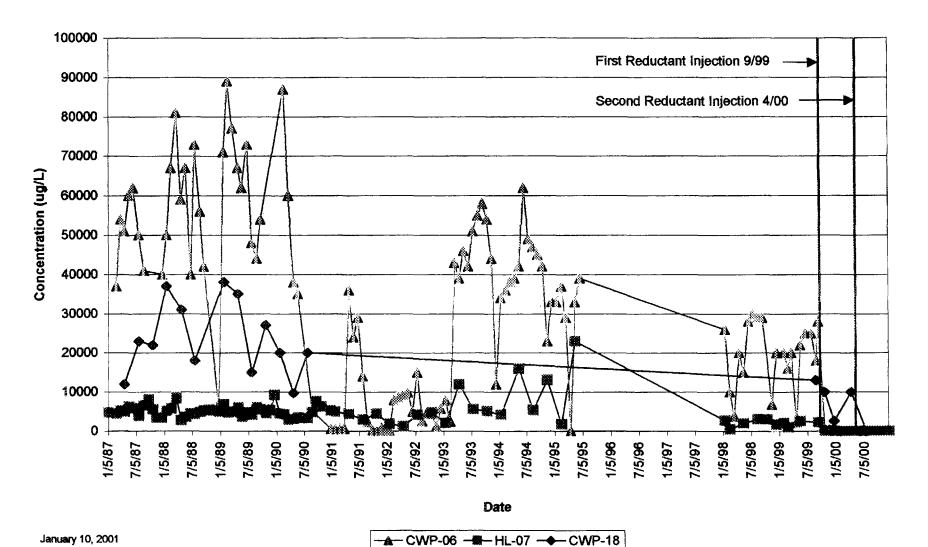


Figure 4
Dissolved Chromium vs. Time in Representative Wells





TABLES

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Table 1	Well Construction Details
Table 2	Ground Water Monitoring Program
Table 3	Ground Water Quality Data
Table 4	Lysimeter Soil Results
Table 5	Lysimeter Water Results
Table 6	Existing and Proposed Ground Water Monitoring Program

TABLE 1
Well Construction Details

Coast Wood Preserving, Inc. Ukiah, CA

Well No.	Ground Surface Elevation	Elevation of Reference Point	Boring Depth	Perforated Interval	Zone Monitored	Casing Diameter
	(ft. above MSL)	(ft. above MSL)	(ft.)	(ft. below ground surface)		(inches)
CWP-1	582.2	582.99	20.0	17-19	1	6
CWP-2A	582.6	582.08	17.1	13.5-15.5	1	6
CWP-2B	582.6	582.08	11.0	9-11	1	6
CWP-3	580.1	580.37	20.0	9-12	1(1)	6
CWP-4A	579.2	578.83	12.0	10-12	1	6
CWP-4D	579.6	578.76	14.5	10-14	1	6
CWP-5	578.2	578.10	20.0	7.5-10	1	6
CWP-6	582.5	582.02	14.8	8-12	1	6
CWP-7	576.1	576.75	25.0	6-25	1&2	12
CWP-8	576.7	577.09	23.0	4-23	1&2	12
CWP-9	578.8	579.21	26.0	6-26	1&2	12
CWP-11	578.0	579.76	12.0	6-11	1	4
CWP-12	576.9	579.29	26.5	13-23	1	4
CWP-13	576.4	579.19	41.5	28-38	2&3	4
CWP-14	576.2	577.65	31.5	18-28	1&2	4
CWP-15	578.1	579.96	41.5	22-32	2	4
CWP-16	578.3	581.84	12.0	7-12	1	4
CWP-17	580.0	581.19	46.5	35-45	4	4
CWP-18	582.3	582.69	14.0	5-14	l	8
CWP-19	584.2	583.37	24.0	6-24	1&2	8
CWP-20	578.9	578.52	23.0	5-23	1	2
CWP-21	576.6	579.39	22.0	5-20	1	2
CWP-22	577.3	580.02	28.0	21.8-26.8	2	4
CWP-101	579.2	578.90	25.0	20-25	2	2
CWP-102	579.1	578.75	16.0	11-16	1	2.
CWP-103	NM	582.73	16.0	6-11	1	2
CWP-104	NM	582.80	13.5	7.5-12.5	i	2
HL-7	577.5	578.36	19.0	9-19	1	12
FPT-1A	NM	574.89	20.0	13-18	1	2
FPT-1B	575.3	575.23	9.0	6-9	1	2
FPT-2A	569.1	568.68	14.5	10-14.5	1	2
FPT-2B	568.9	568.81	8.0	5-8	1	2
FPT-3	574.5	575.57	20.0	11-16	1(1)	2
FPT-4	572.2	573.30	18.0	4-18	1	2
FPT-5	570.0	571.90	17.0	5-17	1	2
AT-1	571.8	572.95	16.5	7-16	1	4
AT-2	569.9	571.10	17.0	7-15.5	1	4
AT-3	568.9	571.04	22.0	9-22	1	4
AT-4	570.1	571.33	30.0	17.5-27	2	4
AT-5	568.6	569.33	41.0	10.3-14.7	1	4

⁽¹⁾ Well construction may cause communication between Zones 1 and 2 NM denotes Not Measured

TABLE 2 GROUNDWATER MONITORING PROGRAM (Revised 7/15/00)

WELL ID	SAMPLING FREQUENCY
AT-I	QUARTERLY
AT-2	QUARTERLY
AT-3	ANNUALLY
AT-4	ANNUALLY
AT-5	ANNUALLY
CWP-2A	QUARTERLY
CWP-2B	SEMI-ANNUALLY
CWP-3	SEMI-ANNUALLY
CWP-4D	ANNUALLY
CWP-5	QUARTERLY
CWP-6	MONTHLY
CWP-7	SEMI-ANNUALLY
CWP-8	MONTHLY
CWP-9	SEMI-ANNUALLY
CWP-11	SEMI-ANNUALLY
CWP-12	SEMI-ANNUALLY
CWP-13	QUARTERLY
CWP-14	SEMI-ANNUALLY
CWP-15	SEMI-ANNUALLY
CWP-16	SEMI-ANNUALLY
CWP-17	SEMI-ANNUALLY
CWP-18	QUARTERLY
CWP-20	MONTHLY
CWP-21	MONTHLY
CWP-22	SEMI-ANNUALLY
CWP-101	QUARTERLY
CWP-102	QUARTERLY
CWP-103	QUARTERLY
CWP-104	QUARTERLY
FPT-3	QUARTERLY*
FPT-4	ANNUALLY
HL7	MONTHLY

Annual Event - October

Semi-Annual - April & October

Quarterly - January, April, July & October

Monthly - February, March, May, June, August, September, November & December

^{*}The frequency of FPT-3 sampling has been revised to quarterly per Monitoring and Reporting Program 99-45.

Groundwater Quality Data 1996 through 2000

Coast Wood Preserving Turlock, CA

		Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	
		(µgЛ)	(μg/l)	(μg/l)	(μg/l)	(mg/L)	(mg/L)
AT-01	12/15/1996	<					
AT-01	07/15/1997	<5					
AT-01	01/15/1998			్			
AT-01	02/15/1998			<5			
AT-01	03/15/1998		-	<5			
AT-01	04/15/1998			<5			
AT-01	05/15/1998			7.8			
AT-01	06/15/1998			<5			
AT-01	07/15/1998			<5			
AT-01	08/15/1998			<5			
AT-01	09/15/1998			< ব			
AT-01	10/15/1998			<5			
AT-01	11/15/1998			5.4			
AT-01	12/15/1998			5			
AT-01	01/30/1999			< 5			
AT-01	02/27/1999			⋖			
AT-01	03/20/1999			< <u>5</u>			
AT-01 AT-01	04/24/1999			<5			
AT-01	05/17/1999 06/19/1999			্ <			
AT-01	07/26/1999			6.8			
AT-01	12/10/1999	<10		0.8 <10	<10	19	45
AT-01	04/10/2000	<10		<10	16	23	35.5
AT-01	07/17/2000	<10		<10	11	19	35.5 37.67
AT-01	10/04/2000	<10	-	<10	100	19	47. 2 9
7.1-01	10/04/2000	<10		<10	100	17	41.29
AT-02	01/15/1998			<5			
AT-02	02/15/1998			<5			
AT-02	05/15/1998			⋖			
AT-02	08/15/1998			<5			
AT-02	10/15/1998			<5			
AT-02	01/30/1999			ঠ			
AT-02	02/27/1999			<5			
AT-02	05/17/1999			<5			
AT-02	12/10/1999	<10		<10	90	28	33
AT-02	04/10/2000	<10		<10	<10	24	45.75
AT-02	07/17/2000	<10		<10	14	18	29.38
AT-02	10/04/2000	<10		<10	94	30	22.94
AT-03	01/15/1998			<5			
AT-03	01/30/1999			্			
AT-03	12/10/1999	<10		<10	 <10	25	85
AT-03	10/04/2000	<10		<10	92	15	18.92
	22.2 2000	7.0				.,	10.72
AT-04	01/15/1998			<5			
AT-04	10/15/1998			ব			
AT-04	01/30/1999			<5			
AT-04	12/10/1999	<10		<10	<10	16	5.3
AT-04	10/04/2000	<10		<10	390	14	7.85
AT-05	01/15/1998			<5			
AT-05	01/30/1999			<5			
AT-05	12/10/1999	<10		<10	21	22	103
AT-05	10/04/2000	<10		<10	23	21	84.73

Groundwater Quality Data 1996 through 2000

SITE	DATE	Arsenic Dissolved	Chromium (Hexavalent)	Chromium Dissolved	Manganese Dissolved	Calcium Dissolved	Sulfate
SILL	DAIL	(μg/I)	(μg/l)	(μg/l)	(μg/l)	(mg/L)	(mg/L)
CWP-02A	08/27/1999	57		4700	230	16	
CWP-02A	12/21/1999	93		23	720	29	101
CWP-02A	04/08/2000	500		330	130	7.9	2.53
CWP-02A	07/18/2000	440		<10	540	16	43
CWP-02A	10/05/2000	440		340	510	22	4.84
CWP-02B	10/15/1998			34			
CWP-02B	08/27/1999	12	· - · ·	10	79	3.9	
CWP-02B	10/22/1999			410		7800	1050
CWP-02B	12/21/1999	50		300	26000	550	1618
CWP-02B	04/08/2000	210	. 	220	6800	150	355.4
CWP-02B	10/05/2000	390		470	1400	150	201.6
CWP-03	12/10/1999	28		42	<10	14	3.6
CWP-03	04/10/2000	14		<10	94	13	5.13
CWP-04D	01/15/1998			<5			
CWP-04D	01/30/1999			ঠ			
CWP-04D	08/27/1999	ರ		♦	<30	25	
CWP-04D	12/10/1999	<10		<10	24	29	101
CWP-04D	04/10/2000	<10		<10	25	30	94.24
CWP-04D	10/04/2000	<10		<10	170	25	73.22
CUM OF	04/10/2000	••		13000	100		226.06
CWP-05 CWP-05	04/10/2000 07/17/2000	<10 <10		12000 920	<100 2200	66 240	336.86 891
i							
CWP-06	12/15/1996	13					
CWP-06	07/15/1997	ぐ					
CWP-06	01/15/1998			26000			
CWP-06	02/15/1998		—	10000			
CWP-06	03/15/1998		-	3800			
CWP-06	04/15/1998			20000			
CWP-06	05/15/1998			15000			
CWP-06	06/15/1998			28000			
CWP-06	07/15/1998			30000			
CWP-06	08/15/1998			29000			
CWP-06	09/15/1998			29000			
CWP-06	11/15/1998			6800			
CWP-06	12/15/1998			20000	}		
CWP-06	01/30/1999			20000			
CWP-06	02/27/1999			16000			
CWP-06	03/20/1999			20000			
CWP-06	04/24/1999			2200			
CWP-06	05/17/1999			22000			
CWP-06	06/19/1999			25000			
CWP-06	07/26/1999			25000			
CWP-06	08/27/1999	ৰ্ব		18000	270	22	
CWP-06	09/11/1999	ঠ		28000	420	35	
CWP-06	10/22/1999			400		30	12.85
CWP-06	11/19/1999	220		230	80	5.7	8.4
CWP-06	12/21/1999	<10		<50	140	3000	863
CWP-06	01/21/2000	<10		<10	32	1890	11
CWP-06	02/14/2000	378		<10	54	3440	915
CWP-06	03/17/2000	14		26	130	2200	914
CWP-06	04/08/2000	430		20		2850	717

TABLE 3

Less

Groundwater Quality Data 1996 through 2000

	7	Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	Suitate
SHE	DATE						(ma/L)
Cum or	06.00.000	(μ g/ I)	(μg/l)	(µg/l)	(μg/l)	(mg/L)	(mg/L)
CWP-06	05/20/2000	<10		28	140	210	9.68
CWP-06	06/17/2000	170		<500	<500	3100	1718.5
CWP-06	07/17/2000	12		<150	285	1200	1965
CWP-06	08/15/2000	260		20	220	1900	2503.015
CWP-06	09/15/2000	340		<50	52	3000	2590.09
CWP-06	10/05/2000	450		<500	<500	3700	1850.25
CWP-06	11/14/2000	460		<10	110	3300	741.59
CWP-06	12/07/2000	320	***	<500	<500	2300	1591
CWP-07	01/15/1998			ঠ			
CWP-07	10/15/1998			9	<10		
CWP-07	01/30/1999			<			
CWP-07	12/17/1999	<10		<10	15	18	35
CWP-07	04/10/2000	<10		<10	38	20	40
CWP-07	10/04/2000	<10		<10	49	18	31.21
CWP-08	12/15/1996	<5					
CWP-08	06/15/1997	ঠ					
CWP-08	07/15/1997	ত ত					
CWP-08	01/15/1998			450			
CWP-08	02/15/1998			410			
CWP-08	03/15/1998	_		110			
CWP-08	04/15/1998			160			
CWP-08	05/15/1998			140			
CWP-08	06/15/1998						
CWP-08	07/15/1998			1300 49			
CWP-08	08/15/1998			61			
CWP-08	09/15/1998						
CWP-08	10/15/1998			62			
				94			
CWP-08 CWP-08	11/15/1998		***	300			
CWP-08	12/15/1998			350			
CWP-08	01/30/1999			270			
	02/27/1999		***	250			
CWP-08	03/20/1999			110			
CWP-08	04/24/1999			100			
CWP-08	05/17/1999			44			
CWP-08	06/19/1999		₩	49			
CWP-08	07/26/1999			44			
CWP-08	08/27/1999	্		62	<30	46	
CWP-08	09/11/1999	ব		44 7600	<30	28	110
CWP-08	10/22/1999	-10		7600	170	400	119
CWP-08	11/19/1999	<10		1200	170	2.5	51
CWP-08	12/08/1999	<10		310	1400	28	94.4
CWP-08	12/21/1999	82		<50	96	1200	243
CWP-08	01/21/2000	24		<10	7200	215	7
CWP-08	02/14/2000	66		<10	7770	198	541
CWP-08	03/17/2000	29		<10	6100	220	523
CWP-08	04/08/2000	130		<10	1500	260	703.32
CWP-08	05/20/2000	68		<10	12000	200	5.79
CWP-08	06/17/2000	200		<250	3300	490	1255
CWP-08	07/17/2000	320		<10	8800	630	1567
CWP-08	08/15/2000	230		<10	6200	960	2616.13
CWP-08	09/15/2000	83		<10	8000	65	1904.84
CWP-08	10/04/2000	140		<10	7500	1500	3016.24
CWP-08	11/14/2000	<10		<10	29000	400	885.78
CWP-08	12/07/2000	28	**-	<10	17000	300	664.3

Groundwater Quality Data 1996 through 2000

		Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	
		(μg/l)	(μg/l)	(μg/l)	(μg/l)	(mg/L)	(mg/L)
CWP-09	10/15/1000			.5			
	10/15/1998			<5			
CWP-09	08/27/1999	<5		<5	<30	17	
CWP-09	12/17/1999	<10		<10	<10	17	28
CWP-09	04/10/2000	<10		11	<10	19	28.39
CWP-09	10/04/2000	<10		17	180	18	29
CWP-101	12/21/1999	<10		120	860	12	30.87
CWP-101	04/08/2000	<10		<10	1100	15	21.04
CWP-101	07/17/2000	<10		77	1300	15	30.75
CWP-101	10/05/2000	<10		<10	1600	530	1845.17
CWP-102	09/13/1999			50			
CWP-102	12/21/1999	<10		<10	110	150	363
CWP-102	04/08/2000	<10		<10	1000	190	679.78
CWP-102	07/18/2000	<10		<10	600	200	867.5
CWP-102	10/05/2000	<10		81	840	14	35.72
CWP-103	07/19/1999	2.6		1100	120	34	
CWP-103	07/20/1999	3.5		3600	79	30	
CWP-103	08/27/1999	12		560	<30	2.8	
CWP-103	12/21/1999	93		600	5700	620	1600
CWP-103	04/08/2000	1100		140000	5600	100	585.13
CWP-103	07/18/2000	160		<10	0.52	1.8	1490
CWP-103	10/05/2000	210		<500	<500	2000	3238.07
CWP-104	07/19/1999	<2		9600	<30	26	
CWP-104	07/20/1999	<2		10000	<30	22	
CWP-104	08/27/1999	<5		9900	<30	23	
CWP-104	12/21/1999	460		<500	<500	17000	4900
CWP-104	04/08/2000	330		<10	<10	4260	1449
CWP-104	07/18/2000	54		<10	0.086	1.6	3300
CWP-104	10/05/2000	13500		1200	340	480	938.52
CWP-11	01/15/1998			<5			
CWP-11	08/15/1998			<5			
CWP-11	10/15/1998			<5			
CWP-11	01/30/1999			<5			
CWP-11	08/27/1999	<5		<	<30	30	
CWP-11	12/17/1999	<10		<10	41	34	26
CWP-11	04/10/2000	<10		<10	<10	21	32.68
CWP-11	10/04/2000	<10		<10	290	29	11.32
CWP-12	10/15/1998			<5			
CWP-12	08/27/1999	<5		7.5	<30	18	
CWP-12	12/17/1999	<10		18	<10	18	76
CWP-12	04/10/2000	<10		14	<10	17	78.72
CWP-12	10/04/2000	<10		<10	<10	20	74.76

Groundwater Quality Data 1996 through 2000

,	T	Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	
		(μg/l)	(μg/l)	(μg/l)	(μg/l)	(mg/L)	(mg/L)
	***************************************						······································
CWP-13	09/20/1982	<4	<20	20			
CWP-13	06/16/1983		1.2	<20			
CWP-13	12/08/1983	<50	<10	<50			
CWP-13	01/24/1984	ব	<10	<10			
CWP-13	03/01/1984	<4	<20	<20			
CWP-13	03/21/1984			81			
CWP-13	01/30/1985	-		<20			
CWP-13	03/01/1985			<20			
CWP-13	04/01/1985			<20			
CWP-13	05/03/1985			<20			
CWP-13	07/02/1985			<20			
CWP-13	08/01/1985			<20			
CWP-13	09/09/1985			<20			
CWP-13	10/01/1985			<20			
CWP-13	10/21/1985			<20			
CWP-13	12/04/1985		_ :	<20			
CWP-13	01/02/1986			<20			
CWP-13	02/13/1986			<20			***
CWP-13	03/14/1986			<20			
CWP-13	04/03/1986			<20			
CWP-13	05/01/1986			<20			
CWP-13	08/13/1986			<20			
CWP-13	09/03/1986			<20			
CWP-13	10/06/1986			<20			
CWP-13	12/03/1986			<20			
CWP-13	01/05/1987			<20			
CWP-13	02/25/1987			<20			
CWP-13	03/27/1987			<20			
CWP-13	04/20/1987		. —	<20			
CWP-13	05/19/1987			<20			
CWP-13	05/20/1987			<20			
CWP-13	06/06/1987			<20			
CWP-13 CWP-13	07/21/1987 08/24/1987			<20 <20			
CWP-13	09/23/1987			<20 <20			
CWP-13	10/19/1987			<20			
CWP-13	11/13/1987			<20			
CWP-13	12/18/1987			<20			
CWP-13	01/18/1988			<20			
CWP-13	02/18/1988			<20			
CWP-13	03/21/1988			<20			
CWP-13	04/22/1988			<20			
CWP-13	05/23/1988	•••		<20			
CWP-13	06/23/1988			<20			
CWP-13	07/19/1988			<20			
CWP-13	08/23/1988			<20			
CWP-13	09/19/1988			<20			
CWP-13	10/24/1988			<20			
CWP-13	11/21/1988			<20			
CWP-13	12/23/1988			<20			
CWP-13	01/24/1989			<20			
CWP-13	02/20/1989			<20			
CWP-13	03/21/1989			<20			
CWP-13	04/28/1989			<20			
CWP-13	05/22/1989			<20			

TABLE 3 Page 6 of 10

Groundwater Quality Data 1996 through 2000

	1	Агѕепіс	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	Surface
SILL	DATE	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(mg/L)	(mg/L)
CWP-13	06/28/1989	· · · · · · · · · · · · · · · · · · ·	\55 ·/	<20	Y		
CWP-13	07/25/1989			<20			
CWP-13	08/29/1989			<20			
CWP-13	09/22/1989			<20			
CWP-13	10/25/1989			<20			
CWP-13	11/21/1989			<20			
CWP-13	12/21/1989			<20			
CWP-13	01/23/1990			<20			
CWP-13	02/21/1990			<20			
CWP-13	03/21/1990		· · · · ·	<20			
CWP-13	04/23/1990			<20	,		
CWP-13	05/23/1990			<20			
CWP-13	06/22/1990			<20			
CWP-13	07/26/1990			<20			
CWP-13	08/23/1990			<20			
CWP-13	08/24/1990			<20			
CWP-13	09/20/1990			<20			
CWP-13	10/23/1990			<20]		
CWP-13	12/27/1990			<5			
CWP-13	01/23/1991			<5			
CWP-13	04/26/1991			<5			
CWP-13	07/29/1991			<5			
CWP-13	10/24/1991			<5			
CWP-13	01/15/1992			<5			
CWP-13	04/15/1992			<5			
CWP-13	07/15/1992			<5			
CWP-13	10/15/1992			<5			
CWP-13	01/15/1993			<5			
CWP-13	04/15/1993			<5			
CWP-13	07/15/1993			<5			
CWP-13	10/15/1993			<5			
CWP-13	01/15/1994			<5			
CWP-13	05/15/1994			<5			
CWP-13	08/15/1994			<5			
CWP-13	11/15/1994			<5			
CWP-13	02/15/1995			<5			
CWP-13	05/15/1995			<5			
CWP-13	01/15/1998			< <u>5</u>			
CWP-13	02/15/1998			<5			
CWP-13	05/15/1998			<5			
CWP-13	08/15/1998			<5			
CWP-13	10/15/1998			<5		-	
CWP-13	01/30/1999			<5			-
CWP-13	02/27/1999			<5			
CWP-13	05/17/1999			< 5			
CWP-13	08/27/1999	⋖ 5		<5	1600	22	
CWP-13	12/17/1999	<10		<10	2100	85	194
CWP-13	04/10/2000	<10		<10	2600	49	100.01
CWP-13	07/17/2000	<10		<10	2400	54	119.4
CWP-13	10/04/2000	<10		<10	5100	190	305.49
CWD 14	00.000.000				Ī		
CWP-14	09/20/1982	<4	<20	<20			
CWP-14	06/16/1983	.		<20			
CWP-14	10/04/1983	64	<50	50			
CWP-14	12/08/1983	<50	<10	<50			
CWP-14	03/01/1984	<4	<20	<20		· · · · · · · · · · · · · · · · · · ·	

TABLE 3

Groundwater Quality Data 1996 through 2000

•		Ai-	I 65	Chanium	Managanasa	Calcium	Sulfate
FITTE	DATE	Arsenic	Chromium	Chromium	Manganese	1 1	Suitate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	(== a (1)
]	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(mg/L)	(mg/L)
CWP-14	03/21/1984			<10			
CWP-14	01/30/1985			<50			
CWP-14	05/03/1985			<20			
CWP-14	08/01/1985			<20			
CWP-14	10/31/1985			<20			
CWP-14	02/13/1986			<20			
CWP-14	05/01/1986			<20			
CWP-14	08/13/1986			<20			
CWP-14	04/20/1987			<20	-		
CWP-14	07/21/1987			<20			
CWP-14	10/01/1987			<20			
CWP-14	01/18/1988			<20			
CWP-14	04/22/1988			<20			
CWP-14	07/19/1988			<20			
CWP-14	10/24/1988			<20			
CWP-14	01/24/1989			<20			
CWP-14	04/28/1989			<20			
CWP-14 CWP-14	07/25/1989			<20 -20			
CWP-14 CWP-14	10/25/1989			<20		***	
CWP-14 CWP-14	01/23/1990 04/24/1990			<20			
CWP-14 CWP-14	04/24/1990			<20 <20			
CWP-14	07/26/1990			<20			
CWP-14	10/24/1990			<20			
CWP-14	01/23/1991			< <u>5</u>			
CWP-14	01/15/1992			ব			
CWP-14	01/15/1993			 <5			
CWP-14	01/15/1994			< <5			
CWP-14	10/15/1998			<5			
CWP-14	08/27/1999	ح ح		<5	840	22	
CWP-14	12/17/1999	<10		<10	2000	49	161
CWP-14	04/10/2000	17		<10	2900	400	1190
CWP-14	10/04/2000	<10		<10	1800	34	61.3
1							
CWP-15	09/20/1982	<4	<20	<20			
CWP-15	03/21/1984			<10			
CWP-15	01/18/1988			<20			
CWP-15	01/24/1990			<20			
CWP-15	01/25/1990			<20			
CWP-15	12/17/1999	<10		<10	44	20	31
CWP-15	04/10/2000	<10		<10	15	22	25.72
CWP-15	10/04/2000	<10		<10	150	17	16.96
1							
CWP-16	12/17/1999	<10		<10	43	23	26
CWP-16	04/10/2000	<10		<10	34	26	24.72
CWP-16	10/04/2000	<10		<10	<10	5.9	3.25
CWP-17	10/15/1998		_	<5			
CWP-17	08/27/1999	7.9		<5	<30	19	
CWP-17	12/17/1999	<10		<10	430	13	5
CWP-17	04/10/2000	<10		<10	870	24	5.02
CWP-17	10/04/2000	<10		<10	1200	29	3.14

Groundwater Quality Data 1996 through 2000

SITE	DATE	Arsenic Dissolved	Chromium (Hexavalent)	Chromium Dissolved	Manganese Dissolved	Calcium Dissolved	Sulfate
SHE	DATE	(μg/l)	(riexavaleiii) (μg/l)	(μg/l)	(μg/l)	(mg/L)	(mg/L)
		\r\$'\	1 /r#1/	(FE/1)	\r# <u>'/</u>	\	
CWP-18	08/27/1999	11		13000	<30	14	
CWP-18	10/22/1999		=	10000		21	110
CWP-18	12/21/1999	<10		2600	930	24	146
CWP-18	04/08/2000	<10		10000	220	18	206
CWP-18	07/17/2000	15		<10	4900	46	265.12
CWP-18	10/05/2000	<10	***	<10	3600	32	188.13
CWP-20	12/15/1996	8					
CWP-20	06/15/1997	7					
CWP-20	07/15/1997	6					
		0					
CWP-20	01/15/1998			23			
CWP-20	02/15/1998			9.7			
CWP-20	03/15/1998			16			
CWP-20	04/15/1998			<5			
CWP-20	05/15/1998			140			
CWP-20	06/15/1998			260			
CWP-20	07/15/1998			340			
CWP-20	08/15/1998	 .		1900			
CWP-20	09/15/1998			2000			
CWP-20	10/15/1998			480			
CWP-20	11/15/1998			5.5			
CWP-20	12/15/1998		·	88			
CWP-20	01/30/1999			18			
CWP-20	02/27/1999			13			
CWP-20	03/20/1999			19			
CWP-20	04/24/1999			26			
CWP-20	05/17/1999			<5			
CWP-20	06/19/1999			<5			
CWP-20	07/26/1999			8.2			
CWP-20	08/27/1999	ර		520	160	7.6	
CWP-20	09/11/1999	く		450	150	7.3	
CWP-20	10/22/1999			7		67	0.031
CWP-20	11/19/1999	<10		<10	49	2.2	2.5
CWP-20	12/21/1999	<10		<10	28	8.1	16.92
CWP-20	01/21/2000	<10	***	<10	56	3	2
CWP-20	02/14/2000	<10		<10	100	3	2
CWP-20	03/17/2000	<10		<10	110	1	2
CWP-20	04/08/2000	<10		<10	150	4.9	10.88
CWP-20	05/20/2000	<10		<10	57	3.6	<1000
WP-20	06/17/2000	<10		<250	<250	<50000	22
CWP-20	07/17/2000	<10		<10	140	11	26.14
CWP-20	08/15/2000	<10		<10	200	13	49.025
CWP-20	09/15/2000	<10		<50	71	21	28.63
WP-20 CWP-20	10/04/2000	<10		16	170	19	25.42
CWP-20	11/14/2000	<10		<10	29	<1000	3.22
WP-20 CWP-20	12/07/2000	<10 <10					
.₩F-4U	12/0//2000	<10		<10	110	6	4.94
CWP-21	12/15/1996	11					
CWP-21	06/15/1997	23					
CWP-21	07/15/1997	ব					
CWP-21	01/15/1998			<5			
CWP-21	02/15/1998			7.3			
CWP-21	03/15/1998			6			
CWP-21	04/15/1998			<5			
WP-21	05/15/1998			8.8			

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Groundwater Quality Data 1996 through 2000

TABLE 3

Turiock, CA								
		Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate	
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	·····	
		(μg/l)	(μg/l)	(μg/l)	(μg/l)	(mg/L)	(mg/L)	
CWP-21	06/15/1998			8.4				
CWP-21	07/15/1998			<5				
CWP-21	08/15/1998			<5				
CWP-21	09/15/1998			17				
CWP-21	10/15/1998			8.5				
CWP-21	11/15/1998			16				
CWP-21	12/15/1998			<5				
CWP-21	01/30/1999			<5				
CWP-21	02/27/1999			5.9				
CWP-21	03/20/1999			5.9				
CWP-21	04/24/1999			<5				
CWP-21	05/17/1999			<5				
CWP-21	06/19/1999			<5				
CWP-21	07/26/1999			5.8				
CWP-21	08/27/1999	<5		<5	48	12		
CWP-21	09/11/1999	১ ও		7.2	<30	12	**-	
CWP-21	10/22/1999	2		√.2 <5		18	28	
CWP-21	11/19/1999	33		<10	<10	5.4	18	
CWP-21	12/21/1999	<10		<10	48	23	36.69	
CWP-21	01/21/2000	18		<10	<10	32	30.09 7	
CWP-21	02/14/2000	67		84	19	20	3	
CWP-21	03/17/2000	<10	***	<10	38	20	33	
CWP-21	04/08/2000	<10		<10	270	29	93.32	
CWP-21	05/20/2000							
CWP-21		18		<10	<10	48	<1000	
CWP-21	06/17/2000	14	400	<10	53	28	94.08	
	07/17/2000	<10		<10	320	27	80.39	
CWP-21	08/15/2000	<10		<10	270	28	68.825	
CWP-21	09/15/2000	19		<10	150	21	50.075	
CWP-21 CWP-21	10/04/2000	<10	No. or	<10	130	20	44.94	
	11/14/2000	57	*	20	500	39	33.29	
CWP-21	12/07/2000	18	***	18	330	26	34.19	
CWP-22	10/15/1998			28				
CWP-22	08/27/1999	<5		14	<30	22		
CWP-22	12/17/1999	40		16	17000	150	577	
CWP-22	04/10/2000	17		<100	13000	480	1448.16	
CWP-22	10/04/2000	<10		41	18000	190	586.5	
PT-03	12/15/1996	ব						
FPT-03	07/15/1997	<5						
PT-03	01/15/1998			6.9				
PT-03	02/15/1998			9.6				
FPT-03	03/15/1998			24]			
FPT-03	04/15/1998			16				
PT-03	05/15/1998			17				
PT-03	06/15/1998			7.9				
₹PT-03	07/15/1998			<5				
PT-03	08/15/1998			12				
PT-03	09/15/1998			<5				
FPT-03	10/15/1998			15				
PT-03	11/15/1998			45 <5				
PT-03	12/15/1998			7.5				
PT-03	01/30/1999			7.3 9.4	1			
. I-00								
TPT_N3								
FPT-03 FPT-03	02/27/1999 03/20/1999			<5 27				

Groundwater Quality Data 1996 through 2000

Coast Wood Preserving Turlock, CA

ſ		Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	
		(μg/l)	(μg/l)	(μg/l)	(μg/I)	(mg/L)	(mg/L)
FPT-03	05/17/1999			13			
FPT-03	06/19/1999			9.3			
FPT-03	07/26/1999			6.4			
FPT-03	12/10/1999	<10		18	<10	23	46
FPT-03	06/26/2000	<10		<10	58	28	<1000
FPT-03	10/04/2000	<10		<10	42	21	64.45
!							
FPT-04	01/15/1998			5.1			
FPT-04	05/15/1998			ব			
FPT-04	12/10/1999	<10		<10	95	24	48
FPT-04	10/04/2000	<10		<10	65	21	69.87
1							
J.							
HL-07	01/15/1998			2800			
HL-07	02/15/1998			450			
HL-07	05/15/1998			2000			
H1L-07	08/15/1998			3100			
HL-07	10/15/1998			3000			
HL-07	12/15/1998			1700			
HL-07	01/30/1999			2100			
HL-07	02/27/1999			1000			
HL-07	05/17/1999			2600			
HL-07	09/11/1999	ぐ		2300	<30	16	
HL-07	10/22/1999			9		30	94
HIL-07	11/19/1999	<10		110	600	1.6	64
HL-07	12/21/1999	<10		<50	550	400	176
HL-07	01/21/2000	32		<10	970	91	3
HL-07	02/14/2000	29		<10	1580	102	265
HL-07	03/14/2000	<10		<10	2400	54	221
HL-07	04/08/2000	<10		<10	1000	133	391.99
HL-07	05/20/2000	<10		<10	1900	96	4
HL-07	06/17/2000	<10		<10	2600	200	635
HL-07	07/17/2000	50		<10	4200	130	320.5
HL-07	08/15/2000	<10	***	10	3200	270	77.95
HL-07	09/15/2000	<10		<10	2900	190	662.49
HL-07	10/04/2000	<10		<10	2500	160	496.47
HL-07	11/14/2000	<10		<10	3600	170	481.07
HL-07	12/07/2000	<10		<10	2900	140	416.21

<u>2.3</u>

TABLE 4

Lysimeter Soil Results

Dissolved Arsenic, Dissolved Chromium, Dissolved Copper

September 1999

Coast Wood Preserving, Inc.

Ukiah, CA.

SITE	DEPTH	DAŢĒ	Dissolved Arsenic	Dissolved Chromium	Dissolved Copper
	(feet)			(mg/kg)	
LY-1	3.5	9/15/99	10	65	33
LY-1	7.5	9/15/99	6.8	91	2.7
LY-2	7.5	9/15/99	15	73	23
LY-3	3.5	9/15/99	6.6	45	24
LY-3	7.5	9/15/99	5.5	41	25

.

TABLE 5
Lysimeter Water Results

Dissolved Chromium October 1999 - October 2000 Coast Wood Preserving, Inc. Ukiah, CA.

SITE	DEPTH	DATE	Dissolved Chromium, Comments
	(feet)		(ug/L)
LY-1	3.5	10/22/99	180
LY-1	3.5	1/29/00	Flooded, polysulfide
LY-1	3.5	4/11/00	<10
LT-1	3.5	7/28/00	Dry
LY-1	7.5	10/22/99	16000
LY-1	7.5	1/29/00	Flooded, polysulfide
LY-I	7.5	4/11/00	12000
LY-I	7.5	7/28/00	Dry
LY-I	7.5	10/18/00	12000
LY-2	3.5	10/22/99	Dry
LY-2	3.5	1/29/00	Flooded
LY-2	3.5	4/11/00	5900
LT-2	3.5	7/28/00	Dry
LY-2	7.5	10/22/99	Dry
LY-2	7.5	1/29/00	Flooded
LY-2	7.5	4/11/00	4000
LY-2	7.5	7/28/00	Dry
LY-2	7.5	10/18/00	10000
LY-3	3.5	10/22/99	Dry
LY-3	3.5	1/29/00	Flooded
LY-3	3.5	4/11/00	<10
LY-3	3.5	7/28/00	Dry
LY-3	7.5	10/22/99	<5
LY-3	7.5	1/29/00	Flooded
LY-3	7.5	4/11/00	<10
LY-3	7.5	07/28/00	Dry
LY-3	7.5	10/18/00	<10

Table 6 Coast Wood Preserving Existing and Proposed Ground-Water Monitoring program

WELL ID	PRESENT FREQUENCY	PROPOSED FREQUENCY	REASONING FOR CHANGE
AT-1	QUARTERLY	DELETE, ABANDON WELL	Off Site, Downgradient, Vandalism Potential
AT-2	QUARTERLY	DELETE, ABANDON WELL	Off Site, Downgradient, Vandalism Potential
AT-3	ANNUALLY	DELETE, ABANDON WELL	Off Site, Downgradient, Vandalism Potential
AT-4	ANNUALLY	DELETE, ABANDON WELL	Off Site, Downgradient, Vandalism Potential
AT-5	ANNUALLY	DELETE, ABANDON WELL	Off Site, Downgradient, Vandalism Potential
CWP-1	NONE	NONE, ABANDON WELL	Up Gradient, Not Required
CWP-2A	QUARTERLY	SEMI_ANNUALLY	Consistent with CWP-2B Frequency
CWP-2B	SEMI-ANNUALLY	SEMI-ANNUALLY	No Change
CWP-3	SEMI-ANNUALLY	DELETE, ABANDON WELL	Potential Pathway, Questionable Construction
CWP-4A	NONE	NONE, ABANDON WELL	Not Presently Used For Monitoring
CWP-4D	ANNUALLY	NONE, ABANDON WELL	Northeast Corner of Property, Not Needed
CWP-5	QUARTERLY	QUARTERLY	No Change, Shallow Well, Often Dry
CWP-6	MONTHLY	QUARTERLY	
CWP-7	SEMI-ANNUALLY	NONE, ABANDON WELL	Well Southeast of Slurry Wall, no Contamination
CWP-8	MONTHLY	QUARTERLY	
CWP-9	SEMI-ANNUALLY	SEMI-ANNUALLY	
CWP-11	SEMI-ANNUALLY	NONE, ABANDON WELL	Long Screen Interval, East of Slurry Wall
CWP-12	SEMI-ANNUALLY	NONE, ABANDON WELL	Southeast Corner of Site, Not Needed
CWP-13	QUARTERLY	QUARTERLY	
CWP-14	SEMI-ANNUALLY	NONE, ABANDON WELL	East of Slurry Wall, Long Screen
CWP-15	SEMI-ANNUALLY	SEMI-ANNUALLY	
CWP-16	SEMI-ANNUALLY	SEMI-ANNUALLY	
CWP-17	SEMI-ANNUALLY	SEMI-ANNUALLY	
CWP-18	QUARTERLY	NONE, ABANDON WELL	Potential Pathway Through Large Well Casing
CWP-19	NONE	NONE, ABANDON TRENCH	Potential Pathway into Upgradient Trench
CWP-20	MONTHLY	QUARTERLY	
CWP-21	MONTHLY	QUARTERLY	
CWP-22	SEMI-ANNUALLY	SEMI-ANNUALLY	
CWP-101	QUARTERLY	QUARTERLY	
CWP-102	QUARTERLY	QUARTERLY	
CWP-103	QUARTERLY	QUARTERLY	
CWP-104	QUARTERLY	QUARTERLY	
FPT-1A	NONE	NONE, ABANDON WELL	Off Site, Vandalism Potential
FPT-1B	NONE	NONE, ABANDON WELL	Off Site, Vandalism Potential
FPT-2A	NONE	NONE, ABANDON WELL	Off Site, Vandalism Potential
FРТ-2B	NONE	NONE, ABANDON WELL	Off Site, Vandalism Potential
FPT-3	QUARTERLY	NONE, ABANDON WELL	Off Site, Vandalism Potential
FPT-4	ANNUALLY	NONE, ABANDON WELL	Off Site, Vandalism Potential
FPT-5	NONE	NONE, ABANDON WELL	Off Site, Vandalism Potential
HL-7	MONTHLY	QUARTERLY	

Annual Event - October

Semi-Annual - April & October

Quarterly - January, April, July & October
Monthly - February, March, May, June, August, September, November & December
Abandon- Wells to be abandoned in accord with applicable agency requirements



Historical Groundwater Monitoring Results

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	.	Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	
		(μg/l)	(μg/l)	(μg/l)	(μ g/ 1)	(mg/L)	(mg/L)
AT-01	10/30/1983	3	<50	<5			
AT-01	01/18/1984	<50	<10	<50		-	
AT-01	01/24/1984		10	12			
AT-01	02/01/1984		30	<50	**		
AT-01	03/01/1984	<4	<20	<20			_
AT-01	03/21/1984		30	60			
AT-01	04/02/1984		40	50			
AT-01	12/04/1984	<4	<20	<20		l _	
AT-01	01/03/1985	~4	30	30			
	01/30/1985		•	40			
AT-01						_	
AT-01	03/01/1985			30 20			
AT-01	05/03/1985		-	20			
AT-01	07/02/1985		_	<20			
AT-01	08/01/1985		_	<20		-	
AT-01	09/09/1985			30			
AT-01	10/01/1985		-	<20			
AT-01	10/31/1985		-	<20			-
AT-01	12/04/1985		-	<20			
10-TA	01/02/1986			<20			
AT-01	04/03/1986	_	-	<20			
AT-01	05/01/1986		-	<20			
AT-01	08/13/1986		_	<20			
AT-01	09/03/1986	_		<20		_	
AT-01	10/06/1986			<20			
AT-01	12/03/1986			<20			
AT-01	01/05/1987		_	<20			
AT-01	02/25/1987			<20			_
AT-01	03/26/1987			<20			
AT-01	04/20/1987			<20			
AT-01	05/19/1987	_	_	<20			
		_	_			_	
AT-01	05/20/1987			<20	***		
AT-01	06/16/1987		_	<20			
AT-01	07/23/1987			<20			
AT-01	08/24/1987		_	<20			****
AT-01	09/23/1987			<20			-
AT-01	10/20/1987	_	-	<20			-
AT-01	11/13/1987			<20			
AT-01	12/18/1987			<20			
AT-01	01/19/1988	-	_	<20			
AT-01	02/18/1988			<20			
AT-01	03/21/1988		_	<20			
4T-01	04/25/1988	_		<20			
AT-01	05/23/1988	_	-	<20	_		
AT-01	06/24/1988		-	<20			
AT-01	07/20/1988			<20	_		
4T-01	08/23/1988			<20			
AT-01	09/20/1988			<20			
AT-01	10/25/1988			<20			
AT-01	11/21/1988		_	<20			
AT-01	12/29/1988			<20			
AT-01	01/26/1989			<20			_
AT-01	02/20/1989			<20	_	_	
AT-01	03/21/1989			<20			
		_			***	_	
AT-01	04/27/1989			<20		-	
AT-01	05/22/1989	_	-	<20		_	
AT-01	06/28/1989			<20			
AT-01	07/26/1989			<20			
AT-01	08/29/1989		_	<20			
AT-01	09/22/1989			<20			
AT-01	10/26/1989			<20			_
AT-01	11/21/1989			<20			
AT-01	12/20/1989			<20		_	
AT-01	01/22/1990		_	<20			
AT-01	02/21/1990			<20			
AT-01	03/21/1990			<20			

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Litera	DATE	Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	(a.ff.)
AT O	M24/1000	(μ g /l)	(µg/l)	(μg/l) <20	(μg/l)	(mg/L)	(mg/L)
AT-01	04/24/1990 05/23/1990			<20 <20		_	
AT-01 AT-01	05/23/1990			<20 <20		_	
AT-01 AT-01	06/22/1990			<20 <20			
AT-01 AT-01	08/23/1990			<20 <20			
AT-01	09/21/1990			<20		•	
AT-01	10/23/1990			<20 <20		_	
AT-01	11/26/1990			<20 <20		_	
AT-01	12/26/1990			< <u>5</u>	_		_
AT-01	01/23/1991			ব			_
AT-01	02/25/1991			ব			
AT-01	03/26/1991			< 5			
AT-01	04/26/1991			<			
AT-01	05/28/1991			ত			
AT-OI	06/25/1991			ত			
AT-01	07/29/1991			<5			_
AT-01	08/26/1991			ব			
AT-01	09/27/1991			<5			
AT-01	10/24/1991			⊲5			
AT-01	11/25/1991			<5			
AT-01	12/23/1991			<5]		
AT-01	01/15/1992	_		5			
AT-01	02/15/1992			<5			
AT-01	03/15/1992			<5			***
AT-01	04/15/1992			<5			
10-TA	05/15/1992			<5		_	
AT-01	06/15/1992			<5			
AT-01	07/15/1992			<5		-	
AT-01	08/15/1992			<5		_	
AT-01	09/15/1992			<5			
AT-01	10/15/1992			<5			
AT-01	11/15/1992			<5	-		
AT-01	12/15/1992			< ব			
AT-01	01/15/1993			<5			
AT-01	02/15/1993	_		্ত			
AT-01 AT-01	03/15/1993 04/15/1993			ব		_	
AT-01	05/15/1993			5 5.2			
AT-01	06/15/1993			3.2 <⁵		_	
AT-01	07/15/1993			্ ব			
AT-01	08/15/1993			ত ত			
AT-01	09/15/1993			্ত ব্য			
AT-01	10/15/1993	Ī.		ঠ	_		
AT-01	11/15/1993			<			
AT-01	12/15/1993			5.7			
AT-01	01/15/1994			5.6			
AT-01	02/15/1994	***		5.7			
AT-01	03/15/1994			<5			
AT-01	05/15/1994			<5			
AT-01	08/15/1994			<5			
AT-01	11/15/1994			<5			
AT-01	02/15/1995			<5			
AT-01	05/15/1995			<5			
NT-01	12/15/1996	<5					 -
AT-01	07/15/1997	<5					
\T-01	01/15/1998			<5			
AT-01	02/15/1998	_	_	<5			
AT-01	03/15/1998			<5			
AT-01	04/15/1998	_		<5			
AT-01	05/15/1998	-		7.8			
AT-01	06/15/1998	_		<5		•	-
AT-01	07/15/1998		_	<			
AT-01	08/15/1998			<5			
AT-01	09/15/1998			<5		_	
AT-01	10/15/1998			<5			

Historical Groundwater Monitoring Results

Coast Wood Preserving Turlock, CA

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SITE AT-01	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Discolused	
AT 01			· }·····			Dissolved	
AT 01		(μ g/ I)	(μg/l)	(μ g/ l)	(μg/l)	(mg/L)	(mg/L)
	11/15/1998	-		5.4	'		
AT-01	12/15/1998			5_			
AT-01	01/30/1999	_		<5		-	
AT-01	02/27/1999			<5			
AT-01	03/20/1999			<5			
AT-01	04/24/1999			<5		-	
AT-01	05/17/1999			<5		_	
AT-01	06/19/1999	-		<5			
AT-01	07/26/1999			6.8			_
AT-01	12/10/1999	<10		<10	<10	19	45
AT-01	04/10/2000	<10		<10	16	23	35.5
AT-01	07/17/2000	<10 _		<10	11	19	37.67
AT-01	10/04/2000	<10		<10	100	19	47.29
4 75 0 73	10.03/1003	46	.20	430			
AT-02	10/03/1983	46	<50	420			_
AT-02	01/24/1984	-50	- 70	90		_	
AT-02	01/25/1984	<50	. <10	<50	- 1	_	
AT-02	02/01/1984		30 40	<50		_	
AT-02	03/12/1984		·. . 40 70	40 100		_	-
AT-02 AT-02	03/21/1984 04/02/1984		70 40	100 50		_	
AT-02 AT-02	01/30/1985		₩0	30 120			
AT-02 AT-02	03/01/1985			120 110			
AT-02 AT-02	05/03/1985	_		<20			_
AT-02	07/02/1985			<20			
AT-02	08/01/1985			<20		_	
AT-02	09/09/1985			18		_	
AT-02	09/20/1985			110			
AT-02	10/01/1985			100	_		
AT-02	12/04/1985			110			
AT-02	01/02/1986			130		l	
AT-02	05/01/1986			60			
AT-02	08/13/1986			50			
AT-02	09/03/1986		. —	130			
AT-02	10/06/1986			90			
AT-02	12/03/1986			80		-	
AT-02	01/05/1987			90			
AT-02	02/25/1987		- · ·	50			
AT-02	03/26/1987	 .		<20			
AT-02	04/20/1987		·	<20			
AT-02	05/19/1987			<20			
AT-02	05/20/1987		•	<20			
AT-02	06/16/1987			50			
AT-02	07/23/1987			<20			
AT-02	08/24/1987		. —	<20		_	
AT-02	09/23/1987			90			
AT-02	10/20/1987		30	30		-	
AT-02	11/13/1987			50		_	
AT-02	12/18/1987			40			
AT-02	01/19/1988			<20			
AT-02	02/18/1988	-	•••	<20		_	
AT-02	03/21/1988			<20			
AT-02	04/25/1988		_	50		_	
AT-02	05/23/1988		_	50		_	
AT-02	06/24/1988			<20		_	
AT-02	07/20/1988			<20			
AT-02	08/23/1988		_	40			
AT-02	09/20/1988	-		<20	- 1		
AT-02	10/25/1988		_	30		_	
AT-02	11/21/1988			<20			
AT-02	12/29/1988		-	<20	-		
AT-02	01/25/1989		_	40			
AT-02	02/20/1989 03/21/1989			<20			
AT-02				<20			

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	CITT	DATE	Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
NT-02 05/221/989 .	SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	/ T)
NT-02 007281989			*******] (#8/1)]		(//g/l)	(mg/L)	(m g /L)
NT-02 07/26/189						_		
NT-02 08(29)1989								
NT-02								
NT-02 1026/1989						-		
NT-02 11/21/1989				-		_		
NT-02 12/201989						-		
NT-02 01/21/1990								
NT-02 03/21/1990								
NT-02 03/21/1990								
NT-02 04/24/1990								
NT-02 05/23/1990								•
NT-02 06/22/1990								
NT-02			_					••-
NT-02								
NT-02 09/21/1990								
NT-02 1023/1990						***		
NT-02								
NT-02 1226/1990				_				
NT-02 01/23/1991								
NT-02			_					_
NT-02			_					
NT-02			_					
NT-02								
NT-02								
NT-02								
NT-02								
NT-02								
NT-02 10/24/1991 .	AT-02			_				
NT-02	AT-02							
AT-02	AT-02	11/25/1991			<5			
AT-02 02/15/1992	AT-02	12/23/1991			<5			
AT-02 03/15/1992	AT-02	01/15/1992	_		19			
AT-02 04/15/1992 < <	AT-02	02/15/1992			<5			
AT-02	AT-02	03/15/1992	_		<5			
AT-02 06/15/1992	AT-02	04/15/1992			<5			
AT-02	AT-02	05/15/1992			<5			
AT-02 08/15/1992	AT-02	06/15/1992		_	<5			
AT-02	AT-02	07/15/1992			<5			
AT-02 10/15/1992	AT-02	08/15/1992		-	<5			
AT-02 11/15/1992	AT-02	09/15/1992			<5			
AT-02	AT-02	10/15/1992			<5			
AT-02 01/15/1993	AT-02	11/15/1992						
AT-02 02/15/1993	AT-02	12/15/1992						-
AT-02 03/15/1993 <-> AT-02 04/15/1993 <-> AT-02 05/15/1993 <-> AT-02 05/15/1993 <-> AT-02 05/15/1993 <-> AT-02 05/15/1993 <-> AT-02 07/15/1993 <-> AT-02 08/15/1993 <-> AT-02 09/15/1993 <-> AT-02 09/15/1993 <-> AT-02 10/15/1993 <-> AT-02 11/15/1993 <-> AT-02 11/15/1993 <-> AT-02 11/15/1993 <-> AT-02 01/15/1994 <-> AT-02 01/15/1994 <-> AT-02 03/15/1994 <-> AT-02 03/15/1994 <-> AT-02 05/15/1994 <-> AT-02 05/15/1995	AT-02							
AT-02	AT-02							
AT-02 05/15/1993	AT-02					- 1		
AT-02 06/15/1993				_		- 1		_
AT-02 07/15/1993				_				
AT-02 08/15/1993							_	
AT-02 09/15/1993								
AT-02 10/15/1993	AT-02							
AT-02 11/15/1993				_				
AT-02 12/15/1993 6.7				_		[
AT-02 01/15/1994 14 AT-02 02/15/1994 10								
AT-02 02/15/1994 10							_	
AT-02 03/15/1994							-	-
AT-02 05/15/1994 9.9 AT-02 08/15/1994 <5 AT-02 02/15/1995 <5 AT-02 05/15/1995 <5	AT-02			_			_	
AT-02 08/15/1994 <5 AT-02 11/15/1994 <5 AT-02 02/15/1995 <5 AT-02 05/15/1995 <5			-				-	
AT-02 11/15/1994 <5 AT-02 02/15/1995 <5 AT-02 05/15/1995 <5							_	-
AT-02 02/15/1995 <5 AT-02 05/15/1995 <5			_				_	
AT-02 05/15/1995 <5	AT-02					- 1		
							-	
AT-02 01/15/1998 <5	AT-02 AT-02				<5 <5	-		_

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γ				····	,	,	
		Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	(d)
AT 03	07/15/1008	(μg/l)	(μg/l)	(µg/l)	(μg/l)	(mg/L)	(m g/ L)
AT-02 AT-02	02/15/1998 05/15/1998	-		<5 <5	-		
AT-02	08/15/1998	_		<5	_		_
AT-02	10/15/1998	_		<5	_		_
AT-02	01/30/1999	_		ঠ			
AT-02	02/27/1999	_		હ		_	
AT-02	05/17/1999	_		હ			
AT-02	12/10/1999	<10		<10	90	28	33
AT-02	04/10/2000	<10		<10	<10	24	45.75
AT-02	07/17/2000	<10	_	<10	14	18	29.38
AT-02	10/04/2000	<10		<10	94	30	22.94
AT-03	01/24/1984	<5	ব	ঠ		_	
AT-03	02/08/1984	<50	<10	<50			
AT-03	03/21/1984	<5	্ব	<10			
AT-03	01/18/1985	<4	<20	<20		-	
AT-03	03/01/1985		· 	<20			
AT-03	05/03/1985			<20			
AT-03	07/02/1985			<20		_	
AT-03	08/01/1985	•••		<20			
AT-03	09/09/1985			<20			
AT-03	10/01/1985			<20 -20		_	_
AT-03	10/31/1985		<20	<20 -20			
AT-03 AT-03	01/02/1986 08/13/1986			<20 <20			
AT-03	09/03/1986	_		<20		_	
AT-03	10/06/1986			<20			
AT-03	12/03/1986	•••		<20			
AT-03	01/05/1987			<20			
AT-03	02/25/1987			<20			
AT-03	03/26/1987			<20			
AT-03	04/20/1987			<20			
AT-03	05/19/1987	-	_	<20			
AT-03	05/20/1987			<20			
AT-03	06/16/1987			<20			
AT-03	07/23/1987			<20			
AT-03	08/24/1987			<20			
AT-03	09/23/1987			<20			
AT-03 AT-03	10/20/1987 11/13/1987			<20 <20		-	
AT-03	12/18/1987			<20			
AT-03	01/19/1988			<20			
AT-03	02/18/1988			<20		_	
AT-03	03/21/1988			40			
AT-03	04/25/1988			<20		_	
AT-03	05/23/1988			<20			_
AT-03	06/24/1988		_	<20		_	
AT-03	07/20/1988			<20			
AT-03	08/23/1988			<20		_	
AT-03	09/20/1988		_	<20			_
AT-03	10/25/1988			<20			
AT-03	11/21/1988		_	<20			
AT-03 AT-03	12/29/1988			<20			
AT-03 AT-03	01/26/1989 02/20/1989			<20 <20			
AT-03	02/20/1989			<20 <20			_
AT-03	04/27/1989			<20			
AT-03	05/22/1989	- -		<20			
AT-03	06/28/1989			<20			_
AT-03	07/26/1989			<20			
AT-03	08/29/1989			<20			
AT-03	09/22/1989			<20			
AT-03	10/26/1989	_		<20			_
	11271/1090			-200			
AT-03	11/21/1989			<20			

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***********	Ĭ	Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	
		(μ g/ 1)	(μ g /l)	(μ g/ 1)	(μ g/ l)	(m g/ L)	(mg/L)
AT-03	02/21/1990			<20			
AT-03	03/21/1990			<20			
AT-03	04/24/1990			<20			
AT-03	05/23/1990			<20			-
AT-03	06/22/1990			<20			
AT-03	07/25/1990			<20			
AT-03	08/23/1990		_	<20			
AT-03 AT-03	09/21/1990 10/23/1990		_	<20 <20			
AT-03	11/26/1990			<20 <20			***
AT-03	12/26/1990			<5	_		
AT-03	01/23/1991			ও			
AT-03	02/25/1991			45			***
AT-03	03/26/1991			<5			
AT-03	04/26/1991			ব			
AT-03	05/28/1991			<5		-	
AT-03	06/25/1991			<		_	
AT-03	07/29/1991			<5			
AT-03	08/26/1991			<5			
AT-03	09/27/1991			<5		-	
AT-03	10/24/1991			<5	-	_	
AT-03	11/25/1991			<5			
AT-03	12/23/1991			<5	-		
AT-03	01/15/1992		•••	্ব		-	
AT-03 AT-03	02/15/1992 03/15/1992			ೆ ぐ			
AT-03	04/15/1992	_		ব			
AT-03	05/15/1992			ব			
AT-03	06/15/1992			<5			
AT-03	07/15/1992			<5			
AT-03	08/15/1992			<5			
AT-03	09/15/1992			< 5		•	
AT-03	10/15/1992			<5			•
AT-03	11/15/1992			<5			_
AT-03	12/15/1992			<5		_	
AT-03	01/15/1993			<5			
AT-03	02/15/1993			<5			_
AT-03	03/15/1993			<5	_	**-	-
AT-03	04/15/1993			< ব	-		
AT-03 AT-03	05/15/1993			্ <			
AT-03	06/15/1993 07/15/1993			ತ ತ			
AT-03	08/15/1993	_		ব			
AT-03	09/15/1993		_	ব			
AT-03	10/15/1993			•			
AT-03	11/15/1993			<5		·	
AT-03	12/15/1993			<5			
AT-03	01/15/1994			<5			
AT-03	02/15/1994	••-	-	<5			
AT-03	03/15/1994			<5		-	
AT-03	01/15/1998			<5			
AT-03	01/30/1999	•••		<5			-
AT-03	12/10/1999	<10		<10	<10	25	85
AT-03	10/04/2000	<10		<10	92	15	18.92
AT 04	0105/1007			-50	j	ı	
AT-04	01/05/1987		**-	<20			
AT-04 AT-04	02/25/1987			<20 <20			
AT-04	03/26/1987			<20 <20			_
AT-04 AT-04	04/20/1987 05/19/1987			<20 <20		_	
AT-04	05/20/1987			<20		_	
AT-04	03/20/1987			<20			
AT-04	10/20/1987			<20			
AT-04	01/19/1988			<20			_
AT-04	04/25/1988			<20			
	025.1700					·	

Historical Groundwater Monitoring Results

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		Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	
	1	(μ ջ/ l)	(μg/l)	(μg/l)	(μg/l)	(mg/L)	(m g/ L)
AT-04	07/20/1988			<20			
AT-04	10/25/1988	_		<20	[
AT-04	01/26/1989		_	<20			_
AT-04	04/27/1989			<20	1		
AT-04	07/26/1989			<20			
AT-04	10/26/1989	_		<20			
AT-04	01/22/1990			<20			
AT-04	04/24/1990	_		<20	- 1	-	
AT-04	07/25/1990			<20			
AT-04	10/23/1990			<20			
AT-04	12/26/1990			<5	-		
AT-04	01/23/1991	-		<5		_	
AT-04	04/26/1991			<5			
AT-04	07/29/1991		_	<5			
AT-04	10/24/1991			<5			
AT-04	01/15/1992			<			_
AT-04	04/15/1992			<5			_
AT-04	07/15/1992			<5		•••	
AT-04	10/15/1992	_		<5			-
AT-04	01/15/1993	-		<5 .r	[
AT-04	04/15/1993			<5 -5	- 1		_
AT-04	07/15/1993	-		ৰ্ব ক			
AT-04 AT-04	10/15/1993			<5 <5			_
A1-04 AT-04	01/15/1994 01/15/1995	_		< <5			
AT-04 AT-04	01/15/1998	_		చ చ			••-
AT-04	10/15/1998			<5	- [•
AT-04	01/30/1999			্ ব			
AT-04	12/10/1999	<10		<10	<10	16	5.3
AT-04	10/04/2000	<10		<10	390	14	7.85
	10.0 2000	1.0		110	3,0	14	7.03
AT-05	01/05/1987			<20			
AT-05	02/25/1987			<20			
AT-05	03/26/1987			<20	1		_
AT-05	04/20/1987	_		<20			
AT-05	05/19/1987			<20			
AT-05	06/16/1987			<20			
AT-05	07/23/1987			<20		-	
AT-05	08/24/1987	-	 .	<20	[
AT-05	09/23/1987	 .		<20			
AT-05	10/20/1987			<20		-	
AT-05	11/13/1987			<20			
AT-05	12/18/1987	_		<20			
AT-05	01/19/1988			<20		-	
AT-05	02/18/1988			<20			
AT-05				.70	11		
AT-05	03/21/1988	_		<20 <20		_	
	04/25/1988	_		<20		_	
AT-05	04/25/1988 05/23/1988			<20 <20	 	_ _ _	
AT-05 AT-05	04/25/1988 05/23/1988 06/24/1988			<20 <20 <20	 	 	
AT-05 AT-05 AT-05	04/25/1988 05/23/1988 06/24/1988 07/20/1988	 		<20 <20 <20 <20		 	
AT-05 AT-05 AT-05 AT-05	04/25/1988 05/23/1988 06/24/1988 07/20/1988 08/23/1988		 	<20 <20 <20 <20 <20	i i	 	
AT-05 AT-05 AT-05 AT-05 AT-05	04/25/1988 05/23/1988 06/24/1988 07/20/1988 08/23/1988 09/20/1988	- - - - - -		<20 <20 <20 <20 <20 <20	 	- - -	
AT-05 AT-05 AT-05 AT-05 AT-05 AT-05	04/25/1988 05/23/1988 06/24/1988 07/20/1988 08/23/1988 09/20/1988 10/25/1988	- - - - - - -	 	<20 <20 <20 <20 <20 <20 <20 <20	 		
AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05	04/25/1988 05/23/1988 06/24/1988 07/20/1988 08/23/1988 09/20/1988 10/25/1988 11/21/1988	-		<20 <20 <20 <20 <20 <20 <20 <20 <20 <20	 		
AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05	04/25/1988 05/23/1988 06/24/1988 07/20/1988 08/23/1988 09/20/1988 10/25/1988 11/21/1988 12/29/1988	-	 	<20 <20 <20 <20 <20 <20 <20 <20 <20 <20	 		
AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05	04/25/1988 05/23/1988 06/24/1988 07/20/1988 08/23/1988 09/20/1988 10/25/1988 11/21/1988 12/29/1988 01/26/1989		 	<20 <20 <20 <20 <20 <20 <20 <20 <20 <20	 		
AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05	04/25/1988 05/23/1988 06/24/1988 07/20/1988 08/23/1988 10/25/1988 11/21/1988 12/29/1988 01/26/1989 02/20/1989	-	 	<20 <20 <20 <20 <20 <20 <20 <20 <20 <20	 		
AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05	04/25/1988 05/23/1988 06/24/1988 07/20/1988 08/23/1988 10/25/1988 11/21/1988 11/21/1988 01/26/1989 02/20/1989 03/21/1989		 	<20 <20 <20 <20 <20 <20 <20 <20 <20 <20	 		
AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05	04/25/1988 05/23/1988 06/24/1988 07/20/1988 08/23/1988 10/25/1988 11/21/1988 11/21/1988 01/26/1989 02/20/1989 03/21/1989		 	<20 <20 <20 <20 <20 <20 <20 <20 <20 <20	 		
AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05	04/25/1988 05/23/1988 06/24/1988 07/20/1988 08/23/1988 10/25/1988 11/21/1988 11/21/1988 01/26/1989 02/20/1989 03/21/1989		 	<20 <20 <20 <20 <20 <20 <20 <20 <20 <20	 		
AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05	04/25/1988 05/23/1988 06/24/1988 07/20/1988 08/23/1988 09/20/1988 10/25/1988 11/21/1988 12/29/1989 02/20/1989 03/21/1989 04/27/1989		 	<20 <20 <20 <20 <20 <20 <20 <20 <20 <20			
AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05	04/25/1988 05/23/1988 06/24/1988 07/20/1988 09/20/1988 10/25/1988 11/21/1988 12/29/1988 01/26/1989 02/20/1989 03/21/1989 04/27/1989 05/22/1989		 	<20 <20 <20 <20 <20 <20 <20 <20 <20 <20	 		
AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05 AT-05	04/25/1988 05/23/1988 06/24/1988 07/20/1988 08/23/1988 10/25/1988 11/21/1988 11/21/1988 01/26/1989 02/20/1989 03/21/1989 04/27/1989 05/22/1989 06/28/1989		 	<20 <20 <20 <20 <20 <20 <20 <20 <20 <20			

Historical Groundwater Monitoring Results

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	1	Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	
		(μ g/ l)	(μg/l)	(μg/l)	(μg/l)	(mg/L)	(mg/L)
AT-05	11/21/1989			<20			
AT-05	12/20/1989			<20			
AT-05	02/21/1990			<20			
AT-05	03/21/1990			<20			
AT-05	04/24/1990			<20			
AT-05	05/23/1990			<20	-		
AT-05	07/25/1990	***		<20			
AT-05	08/23/1990			<20			
AT-05	09/21/1990			<20			
AT-05	10/23/1990			<20		_	
AT-05	12/26/1990			<5		-	
AT-05	01/23/1991			<5			
AT-05	04/26/1991			<5			
AT-05	07/29/1991			<5			
AT-05	10/24/1991		•	<5			
AT-05	01/15/1992		_	<5			
AT-05	04/15/1992			<5			
AT-05	07/15/1992			<5			
AT-05	10/15/1992	-		<5			
AT-05	01/15/1993			<5			
AT-05	04/15/1993	_		<5			
AT-05	07/15/1993			<5	_		_
AT-05	10/15/1993			<5			
AT-05	01/15/1994			<5			
AT-05	01/15/1995			<5			
AT-05	01/15/1998			<5			
AT-05	01/30/1999			<5			
AT-05	12/10/1999	<10		<10	21	22	103
AT-05	10/04/2000	<10	***	<10	23	21	84.73
CWP-01	04/02/1981			<10			
CWP-01	05/08/1981			<10			
CWP-01	06/09/1981	4		10			_
CWP-01	09/28/1982	<4	<20	<20	90	7.8	14
CWP-01	03/20/1984	_		<10			
CWP-01	01/18/1988			<20			
CWP-01	01/24/1989			<20			
CWP-02A	9/28/1982	92	5180	5950	120	6.25	15
CWP-02A	10/04/1983	1800	390	3600			
CWP-02A	12/08/1983	260	2400	2400			•••
CWP-02A	03/01/1984	360	11000	11000			
CWP-02A	03/25/1984	58		560		_	
CWP-02A	01/30/1985			240	-		
CWP-02A	05/03/1985			1900			
CWP-02A	08/01/1 <i>9</i> 85			40			
CWP-02A	10/31/1985		•	6600			
CWP-02A	02/19/1986			6500			
CWP-02A	05/01/1986			2800			
CWP-02A	08/13/1986			310			
CWP-02A	04/20/1987			1400		*	
CWP-02A	07/22/1987			380			
CWP-02A	01/20/1988			940			
CWP-02A	04/25/1988			400			•
CWP-02A	07/20/1988			590			
	10/25/1988			1300]		
CWP-02A				810			
CWP-02A CWP-02A	01/24/1989			0.0			
				730			
CWP-02A	01/24/1989						
CWP-02A CWP-02A	01/24/1989 04/28/1989			730			
CWP-02A CWP-02A CWP-02A CWP-02A	01/24/1989 04/28/1989 07/26/1989			730 3900		 	
CWP-02A CWP-02A CWP-02A CWP-02A CWP-02A	01/24/1989 04/28/1989 07/26/1989 10/26/1989 04/24/1990	 		730 3900 3600 5260	 	 	
CWP-02A CWP-02A CWP-02A CWP-02A CWP-02A CWP-02A	01/24/1989 04/28/1989 07/26/1989 10/26/1989 04/24/1990 07/25/1990	 		730 3900 3600	 	 	
CWP-02A CWP-02A CWP-02A CWP-02A CWP-02A	01/24/1989 04/28/1989 07/26/1989 10/26/1989 04/24/1990	 		730 3900 3600 5260 2420	 	 	

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SITE			,				~~~~~~~
SITE	l	Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	
		(µg/l)	(μg/l)	(µg/l)	<u>(μg/l)</u>	(mg/L)	(mg/L)
CWP-02A	04/15/1992			6150		-	
CWP-02A	07/15/1992			360		-	
TWP-02A	10/15/1992			3350			
CWP-02A	01/15/1993		_	154		_	
CWP-02A	04/15/1993			649			
CWP-02A CWP-02A	07/15/1993 10/15/1993			185 21			
CWP-02A	01/15/1994			190			
CWP-02A	05/15/1994	_		1785			
WP-02A	08/15/1994	_		6100			
WP-02A	11/15/1994	_		<5			_
WP-02A	02/15/1995	-		964			
CWP-02A	05/15/1995			7.1			
WP-02A	01/15/1998			250			
WP-02A	02/15/1998			110			_
WP-02A	05/15/1998			230			_
WP-02A	08/15/1998			110			_
WP-02A	10/15/1998	_	•••	110			_
WP-02A	01/30/1999			370			
WP-02A	02/27/1999	_		1600			
WP-02A	05/17/1999			8100			
WP-02A	08/27/1999	57		4700	230	16	
WP-02A	12/21/1999	93		23	720	29	101
CWP-02A	04/08/2000	500	·	330	130	7.9	2.53
CWP-02A	07/18/2000	440	 -	<10	540	16	43
WP-02A	10/05/2000	440		340	510	22	4.84
WP-02B	04/02/1981			14000			
CWP-02B	06/09/1981	4		16000	-		-
CWP-02B	09/28/1982	<4	12000	13100	10	16.4	59
CWP-02B	06/16/1983	41		3700			
CWP-02B	10/04/1983	320	4000	9200			
CWP-02B	12/08/1983		8500	9000			
CWP-02B	03/01/1984	15	11000	11000			
CWP-02B	03/21/1984	10	2400	2400	[
CWP-02B CWP-02B	01/30/1985 05/03/1985			1400			
WP-02B	08/01/1985	_		1000 790			
WP-02B	02/19/1986			6000			_
CWP-02B	05/01/1986			1700			
WP-02B	08/13/1986			6300			_
WP-02B	04/20/1987			3800			_
WP-02B	01/19/1988			2700			_
WP-02B	01/24/1989			7400			
WP-02B	01/15/1992			7850			_
CWP-02B	01/15/1993			6800			
WP-02B	01/15/1994		•	2700			
WP-02B	10/15/1998			34			
WP-02B	08/27/1999	12		10	7 9	3.9	
WP-02B	10/22/1999			410	1	7800	1050
WP-02B	12/21/1999	50		300	26000	550	1618
WP-02B	04/08/2000	210		220	6800	150	355.4
WP-02B	10/05/2000	390		470	1400	150	201.6
					I		
WP-03	04/02/1981	_		20			-
WP-03	06/09/1981	4	_	20			
WP-03	06/16/1983	21		50			
CWP-03	12/08/1983		70	90			
71 m oc	03/01/1984	650	20	160			
	03/21/1984	28		<10		-	
CWP-03							
CWP-03 CWP-03	01/30/1985	-		40			
CWP-03 CWP-03 CWP-03	01/30/1985 05/03/1985	_		180	_		_
CWP-03 CWP-03 CWP-03 CWP-03 CWP-03 CWP-03	01/30/1985				_ _ _		

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	ł	Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	·····
	<u> </u>	(μ g/ 1)	(µg/I)	(μg/l)	(µg/l)	(mg/L)	(m g/ L)
CWP-03	01/18/1988			<20			
CWP-03	01/24/1989			<20	-		
CWP-03	04/27/1989		***	<20			
CWP-03	04/26/1991			130			
CWP-03	04/15/1992	38	_	<5 42	-10		2.6
CWP-03	12/10/1999	28		42	<10	14	3.6
CWP-03	04/10/2000	14		<10	94	13	5.13
CWP-04A	04/02/1981			40			
CWP-04A	09/28/1982	<4	<20	<20	2240	65 6	47
CWP-04A	03/25/1984	60		57			
CWP-04D	04/02/1981			<10			
CWP-04D	06/09/1981	4		20			-
CWP-04D	09/28/1982	<4	<20	<20	30	27.6	88
CWP-04D	03/20/1984	_		<10	-		
CWP-04D	01/18/1988		***	<20	-		
CWP-04D	01/24/1989			<20			
CWP-04D	01/23/1990		***	<20		-	
CWP-04D	01/15/1992			ব			-
CWP-04D	01/15/1993			<5			
CWP-04D	01/15/1994			<5			
CWP-04D	01/15/1995 01/15/1998			্ব ব্			
CWP-04D CWP-04D	01/30/1999			্ত ব্			
CWP-04D	08/27/1999	<5		ব	<30	25	***
CWP-04D	12/10/1999	<10		<10	24	29	101
CWP-04D	04/10/2000	<10		<10	25	30	94.24
CWP-04D	10/04/2000	<10		<10	170	25	73.22
C 01D	10/0 11 2000	1.0		1.0	1,0		75.22
CWP-05	04/02/1981			43000			
CWP-05	06/09/1981	4		31000			
CWP-05	06/16/1983	-		24000			
CWP-05	12/08/1983		19000	19000			
CWP-05	03/01/1984		15000	15000			
CWP-05	03/21/1984			14000			
CWP-05	02/19/1986			14000			
CWP-05	04/20/1987			12000			
CWP-05	01/20/1988			12000		-	
CWP-05	01/24/1989			14000			
CWP-05	04/27/1989			13000			
CWP-05 CWP-05	04/26/1991	-10		1960 12000	-100		336.86
CWP-05	04/10/2000 07/17/2000	<10 <10		920	<100 2200	66 240	336.80 891
C#1-03	071712000	<10		920	2200	240	891
CWP-06	04/02/1981			125000			
CWP-06	05/08/1981	6		120000			
CWP-06	06/09/1981	(2)		120000			
CWP-06	06/16/1983			75000			
CWP-06	08/13/1983	<50	78000	78000			
CWP-06	12/08/1983	800	72000	75000		_	
CWP-06	01/06/1984		23000	22000			
CWP-06	01/24/1984		64000	72000			
CWP-06	02/01/1984		36000	73000			
CHUD O/	03/01/1984		70000	70000		-	-
	03/21/1984	10	63000	50000		-	
CWP-06 CWP-06			62000	63000			
CWP-06 CWP-06	04/02/1984						
CWP-06 CWP-06 CWP-06	12/04/1984		59000	59000		-	
CWP-06 CWP-06 CWP-06 CWP-06	12/04/1984 01/03/1985			59000			_
CWP-06 CWP-06 CWP-06 CWP-06 CWP-06	12/04/1984 01/03/1985 01/30/1985		59000	59000 65000			
CWP-06 CWP-06 CWP-06 CWP-06 CWP-06 CWP-06	12/04/1984 01/03/1985 01/30/1985 03/01/1985		59000	59000 65000 40000		 	
CWP-06 CWP-06 CWP-06 CWP-06 CWP-06 CWP-06 CWP-06	12/04/1984 01/03/1985 01/30/1985 03/01/1985 04/01/1985		59000	59000 65000 40000 57000		 	
CWP-06 CWP-06 CWP-06 CWP-06 CWP-06 CWP-06	12/04/1984 01/03/1985 01/30/1985 03/01/1985		59000	59000 65000 40000		 	

Historical Groundwater Monitoring Results

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			Page 11 01 33				
~~~~		Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	
		(μg/l)	(μg/1)	(μg/l)	(μg/l)	(mg/L)	(mg/L)
CWP-06	09/09/1985			50000			
CWP-06	10/31/1985	<del></del> .		12000			
CWP-06	12/04/1985			12000			
CWP-06	01/02/1986			34000	-		
CWP-06	02/19/1986			13000			
CWP-06	03/04/1986			14000			
CWP-06	04/03/1986		_	26000			
CWP-06	05/01/1986			48000			
CWP-06	08/13/1986			35000			-
CWP-06	09/03/1986			<20			_
CWP-06	10/06/1986			17000			-
CWP-06	02/25/1987		-	37000			-
CWP-06	03/27/1987	<b>:</b>		54000			
CWP-06	04/20/1987			51000			
CWP-06	05/19/1987			60000		-	
CWP-06	05/20/1987	•••		60000		_	
CWP-06	06/16/1987			62000		_	
CWP-06	07/22/1987	,	-	50000			
CWP-06	08/24/1987			41000			
CWP-06	12/21/1987	_	_	40000			
CWP-06	01/20/1988			50000			
CWP-06	02/18/1988	, ,	_	67000			
CWP-06	03/21/1988	<del></del>	. —	81000			
CWP-06	04/22/1988			59000			
CWP-06	05/23/1988			67000			
CWP-06	06/24/1988		_	40000			
CWP-06	07/19/1988			73000			
CWP-06	08/24/1988			56000			
CWP-06	09/19/1988			42000			
CWP-06	12/23/1988			6900			
CWP-06 CWP-06	01/25/1989 02/21/1989			71000 89000			
CWP-06	03/21/1989	_		77000			
CWP-06	04/28/1989	_		67000			
CWP-06	05/22/1989			62000			
CWP-06	06/28/1989			73000			
CWP-06	07/26/1989			48000			
CWP-06	08/29/1989			44000			
CWP-06	09/22/1989			54000			
CWP-06	02/21/1990		• •••	87000			
CWP-06	03/21/1990			60000	1		
CWP-06	04/24/1990		· ,	38000			
CWP-06	05/23/1990	_		35000		***	
CWP-06	08/24/1990			5100			
CWP-06	12/26/1990		_	610			
CWP-06	01/23/1991			523	[		
CWP-06	02/25/1991			552			
CWP-06	03/26/1991	-		632			
CWP-06	04/26/1991			36000		-	•••
CWP-06	05/28/1991			24100		_	
CWP-06	06/25/1991			29000	1		
CWP-06	07/26/1991	-		13500			-
CWP-06	08/26/1991	-		2360	- 1		-
CWP-06	09/27/1991			209			
CWP-06	10/24/1991		-	88			
CWP-06	11/25/1991	-		833	- i		
CWP-06	12/23/1991			145	[		
CWP-06	01/15/1992	-	_	253			-
CWP-06	02/15/1992		-	8020			-
CWP-06	03/15/1992			8700			_
CWP-06	04/15/1992			9320	- 1		-
CWP-06	05/15/1992		_	9900	- 1	-	-
CWP-06	06/15/1992			4980			-
					ľ		
CWP-06	08/15/1992		_	2630			

# Historical Groundwater Monitoring Results

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Cime	DATE	Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	( 7)
CAND DA	J	(μg/1)	(μg/l)	(μg/l) 4950	(μg/l)	(mg/L)	(mg/L)
CWP-06 CWP-06	09/15/1992			4850		-	
CWP-06	10/15/1992 11/15/1992	•	_	4380 1250			
CWP-06	12/15/1992			5850			
CWP-06	01/15/1993			7880			
CWP-06	02/15/1993			2460			
CWP-06	03/15/1993			43100			
CWP-06	04/15/1993			38800			-
CWP-06	05/15/1993			46000			_
CWP-06	06/15/1993			42200			
CWP-06	07/15/1993	_		50900			
CWP-06	08/15/1993			54800	***		
CWP-06	09/15/1993			57800			-
CWP-06 CWP-06	10/15/1993 11/15/1993	_		54200			_
CWP-06	12/15/1993			43500 11950	_		
CWP-06	01/15/1994			34300			_
CWP-06	02/15/1994			35900			
CWP-06	03/15/1994			38200		_	
CWP-06	04/15/1994			38600			
CWP-06	05/15/1994			41800			
CWP-06	06/15/1994		-	62500			
CWP-06	07/15/1994		-	48900			-
CWP-06 CWP-06	08/15/1994			46800			
CWP-06	09/15/1994 10/15/1994			44600 42000	-		
CWP-06	11/15/1994			22600	_		
CWP-06	12/15/1994			32900			
CWP-06	01/15/1995			33000	-		
CWP-06	02/15/1995			37400			
CWP-06	03/15/1995			29000			
CWP-06	04/15/1995	_		21			
CWP-06	05/15/1995			33000		-	
CWP-06	06/15/1995	75400		39000			
CWP-06 CWP-06	07/15/1995 12/15/1996	25400 13		_			
CWP-06	07/15/1997	13 <5					
CWP-06	01/15/1998	_		26000			
CWP-06	02/15/1998			10000			
CWP-06	03/15/1998			3800			
CWP-06	04/15/1998			20000		_	
CWP-06	05/15/1998			15000			
CWP-06	06/15/1998			28000	1		
CWP-06	07/15/1998			30000		-	
CWP-06 CWP-06	08/15/1998		_	29000		_	
CWP-06 CWP-06	09/15/1998 11/15/1998			29000			•
CWP-06	12/15/1998		_	6800 20000			
CWP-06	01/30/1999			20000			
CWP-06	02/27/1999			16000			<del></del>
CWP-06	03/20/1999			20000			
CWP-06	04/24/1999		-	2200			
CWP-06	05/17/1999			22000			
CWP-06	06/19/1999			25000			
CWP-06	07/26/1999			25000			
CWP-06	08/27/1999	<5		18000	270	22	
CWP-06	09/11/1999	<5		28000	420	35	
CWP-06	10/22/1999	220		400		30	12.85
CWP-06 CWP-06	11/19/1999	220		230	80	5.7	8.4
CWP-06	12/21/1999 01/21/2000	<10 <10		<50 <10	140 32	3000 1890	863 11
CWP-06	02/14/2000	378		<10	52 54	1890 3440	11 915
CWP-06	03/17/2000	14		26	130	2200	913
CWP-06	04/08/2000	430		48	130	2850	1106.95
CWP-06	05/20/2000	<10		28	140	210	9.68

# Historical Groundwater Monitoring Results

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		Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	 
		(μg/l)	(μg/l)	(μg/i)	(μg/l)	(mg/L)	(mg/L)
CWP-06	06/17/2000	170	•••	<500	<500	3100	1718.5
CWP-06	07/17/2000	12	*	<150	285	1200	1965
CWP-06	08/15/2000	260		20	220	1900	2503.015
CWP-06	09/15/2000	340		<50	52	3000	2590.09
CWP-06	10/05/2000	450		<500	<500	3700	1850.25
CWP-06	11/14/2000	460		<10	110	3300	741.59
CWP-06	12/07/2000	320		<500	<500	2300	1591
CWP-07	09/20/1982	<4	<20	<20	210	19.4	15
CWP-07	12/08/1983	< <b>5</b> 0	<10	<50		-	
CWP-07 CWP-07	03/01/1984	<4 	<10	200 <10		_	
CWP-07	03/20/1984 03/21/1984	 ব	 <⁵	<5			
CWP-07	01/30/1985	2 -	9	<20			
CWP-07	05/03/1985		_	<20			
CWP-07	08/01/1985			<20			
CWP-07	10/31/1985			<20			
CWP-07	02/13/1986			<20			
CWP-07	05/01/1986			<20			
CWP-07	08/13/1986		•	<20			
CWP-07	04/20/1987		***	<20			
CWP-07	07/21/1987			<20			
CWP-07	10/19/1987			<20			
CWP-07	01/18/1988			<20			
CWP-07	04/25/1988			<20			
CWP-07	10/24/1988			<20			
CWP-07	01/24/1989			<20			•
CWP-07	04/28/1989			<20			••-
CWP-07	07/25/1989			<20			
CWP-07	10/25/1989	***	_	<20		_	
CWP-07	01/22/1990			<20		-	
CWP-07	04/23/1990			<20			
CWP-07	07/25/1990			<20			
CWP-07	10/23/1990	•••		<20		-	
CWP-07 CWP-07	12/27/1990			<5 -4		_	
CWP-07 CWP-07	01/23/1991 04/26/1991			-ব -ব			
CWP-07	04/26/1991		_	্ ব			
CWP-07	10/24/1991	•••		< <b>5</b>		-	
CWP-07	01/15/1992			ব			
CWP-07	04/15/1992			<5			
CWP-07	07/15/1992			<5			
CWP-07	10/15/1992		_	<5			
CWP-07	01/15/1993			<5			
CWP-07	04/15/1993			<5		_	
CWP-07	07/15/1993			<5		-	
CWP-07	10/15/1993			<5		_	
CWP-07	01/15/1994			8.3			
CWP-07	02/15/1994			5.5			
CWP-07	01/15/1995		-	<5			**-
CWP-07	01/15/1998			<5	-		
CWP-07	10/15/1998			9	<10		
CWP-07	01/30/1999			<5	]		
CWP-07	12/17/1999	<10		<10	15	18	35
CWP-07	04/10/2000	<10		<10	38	20	40
CWP-07	10/04/2000	<10		<10	49	18	31.21
~~	00						
CWP-08	09/20/1982	<4	13100	14000	620	44.3	44
CWP-08	06/16/1983			22000			
CWP-08	07/19/1983		12000	12000	_		
CWP-08	07/20/1983		11000	11000			
CWP-08	07/21/1983		11000	11000	-		-
CWP-08	07/22/1983	_	11000	11000			-
CWP-08	07/23/1983	_	10000	10000	-		
CWP-08	07/28/1983		8750	9600	i		

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SITE	DATE	Arsenic Dissolved	Chromium (Hexavalent)	Chromium Dissolved	Manganese Dissolved	Calcium Dissolved	Sulfate
		(μg/l)	(μg/l)	(μg/l)	(µg/1)	(mg/L)	(m <b>g/</b> L)
WP-08	08/02/1983	<del></del>	6900	7300			energia estant.
CWP-08	08/04/1983	_	6800	6900			
CWP-08	08/09/1983		6600	6900			
CWP-08	08/11/1983	4	<50	<50	_		
CWP-08	08/12/1983		6600	6800			
CWP-08	08/12/1983	4	6600	6900	_	_	
			7800	8800	-		
CWP-08	10/04/1983	5					
CWP-08	12/08/1983		740	1100			
CWP-08	12/12/1983			530		_	
CWP-08	12/13/1983			940			
CWP-08	01/06/1984		1000	1000			-
CWP-08	01/24/1984		900	900			
CWP-08	02/01/1984		900	900			-
CWP-08	03/01/1984		1200	1200			
CWP-08	03/20/1984			1100		-	
CWP-08	03/21/1984		1200	1300			
CWP-08	04/02/1984		1300	1400			
CWP-08	12/04/1984		470	470			
CWP-08	01/03/1985		520	520			
CWP-08	01/31/1985		520	520	[		_
CWP-08	03/01/1985			400			
CWP-08	04/01/1985			110			
CWP-08	05/03/1985			100			
CWP-08	07/02/1985			150			
CWP-08	08/01/1985		_	50			
CWP-08	09/09/1985			<20			
				<20			_
CWP-08	10/01/1985						
CWP-08	10/31/1985	_	_	(20)			
CWP-08	12/04/1985			<20			
CWP-08	01/02/1986	_	-	<20		_	
CWP-08	02/19/1986			100			
CWP-08	03/14/1986	-		60		-	
CWP-08	04/03/1986			50	1		
CWP-08	05/01/1986	•••		<20			
CWP-08	08/13/1986			<20	[		
CWP-08	09/03/1986			<20			
CWP-08	10/06/1986			<20			_
CWP-08	12/03/1986			<20			
CWP-08	01/05/1987			90			
CWP-08	02/25/1987			50			
CWP-08	03/27/1987			90			
CWP-08	04/20/1987			30			
CWP-08	05/19/1987			<20			
CWP-08	05/20/1987			<20			_
CWP-08				<20 <20			_
CWP-08	06/16/1987 07/21/1987	•••		<20 <20			_
						•••	
CWP-08	08/24/1987			<20			
CWP-08	09/23/1987	***		<20			
CWP-08	10/19/1987			<20			_
WP-08	11/13/1987	•		150			
CWP-08	12/18/1987			40		_	
CWP-08	01/18/1988			140			
CWP-08	02/18/1988		•••	<20			
CWP-08	03/21/1988			<20		***	
CWP-08	04/22/1988		_	20			
CWP-08	05/23/1988			<20			
WP-08	06/23/1988			<20			
CWP-08	07/19/1988			<20	}		
CWP-08	08/23/1988			<20			
			_		]		
CWP-08	09/19/1988			<20			
CWP-08	10/24/1988			<20			
CWP-08	11/21/1988			<20		-	
WP-08	12/23/1988			190			
WP-08	01/25/1989			84	[		
WP-08	02/20/1989			<20			

# Historical Groundwater Monitoring Results

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	<u> </u>	Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate				
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved					
	<u> </u>	(µg/I)	(µg/l)	(μg/l)	(μg/l)	(mg/L)	(mg/L)				
CWP-08	03/21/1989		_	190		_					
CWP-08	04/28/1989			60							
CWP-08	05/22/1989			70		-					
CWP-08	06/28/1989			<20							
WP-08	07/25/1989		_	<20	-		_				
CWP-08	08/29/1989			<20		~					
WP-08	09/22/1989			<20 -20							
CWP-08 CWP-08	10/26/1989 11/21/1989			<20 <20		-					
.WP-08	12/21/1989			(20)							
WP-08	01/23/1990	_	_	<20							
WP-08	02/21/1990			30							
WP-08	03/21/1990	-		20							
WP-08	04/23/1990			<20							
WP-08	05/23/1990			<20							
WP-08	06/22/1990		_	20							
WP-08	07/25/1990			30							
WP-08	08/24/1990			<20		l					
WP-08	09/20/1990			<20		_					
CWP-08	10/23/1990			<20							
WP-08	11/26/1990		_	<20		-					
WP-08	12/27/1990		***	140							
CWP-08	01/23/1991			52							
CWP-08	02/25/1991			13		-					
WP-08	03/26/1991		·	112							
WP-08	04/26/1991			17							
WP-08	05/28/1991			15							
WP-08	06/25/1991			26	-						
WP-08	07/26/1991			14							
WP-08	08/26/1991			3630							
WP-08	09/27/1991			2170							
WP-08	10/24/1991			<5			-				
TWP-08	11/25/1991			17							
CWP-08 CWP-08	12/23/1991	<del></del>		19							
.WP-08	01/15/1992 02/15/1992			5 27			-				
WP-08	02/15/1992			51	***						
CWP-08	04/15/1992	_		53							
CWP-08	05/15/1992			20							
CWP-08	06/15/1992			19							
WP-08	07/15/1992		· · · · · · · · · · · · · · · · · · ·	30	-						
WP-08	08/15/1992			< <b>5</b>							
WP-08	09/15/1992			25							
WP-08	10/15/1992			35							
WP-08	11/15/1992			42							
WP-08	12/15/1992			42		_	_				
WP-08	01/15/1993	-	_	126	[						
WP-08	02/15/1993			320	1						
WP-08	03/15/1993	-	-	135							
WP-08	04/15/1993	-		198		-					
WP-08	05/15/1993			67		_					
WP-08	06/15/1993			110		-					
WP-08	07/15/1993			39							
WP-08	08/15/1993	***		33							
WP-08	09/15/1993		_	70		_					
WP-08	10/15/1993		-	66							
WP-08	11/15/1993			37	1						
WP-08	12/15/1993			190			_				
WP-08	01/15/1994			39			-				
WP-08	02/15/1994			100							
WP-08	03/15/1994			61							
WP-08	04/15/1994			80	[						
WP-08 WP-08	05/15/1994			65	- 1						
	06/15/1994			57	11						

### Historical Groundwater Monitoring Results

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STITE   DATE   Dissolved   (Hexavalent)   Dissolved   Dissolved   Comp.	***************************************	<del>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</del>	Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
CWP-08 09151994	SITE	DATE	l	(Hexavalent)				
CWP-08 09151994			(µg/l)	(μg/l)	(μg/l)	(μg/l)	(mg/L)	(mg/L)
CWP-08 101/51994	CWP-08	08/15/1994		*********	NAME OF THE PROPERTY OF THE PARTY OF THE PAR			
CWP-08 11/15/1994	CWP-08	09/15/1994			<5			
CWP-08 07151995	CWP-08	10/15/1994	***		<5			
CWP-08 02151995	CWP-08	11/15/1994			58			
CWP-08	CWP-08	12/15/1994			150			
CWP-08	CWP-08	01/15/1995			640			
CWP-08	CWP-08							
CWP-08								
CWP-08 06/15/1995 473 — — 250 — — 250 — — 250 CWP-08 07/15/1995 473 — — — — — — — — — — — — — — — — — — —							-	
CWP-08 12/15/1996 <5	II						-	
CWP-08 06/15/1997 <5					250			
CWP-08								_
CWP-08 0715/1998				_	_			
CWP-08 01/15/1998	T .				_		_	
CWP-08 03/15/1998					450			
CWP-08								
CWP-08			_					
CWP-08	i						l	
CWP-08							1 ==	
CWP-08 07/15/1998 49							_	_
CWP-08								
CWP-08	CWP-08							
CWP-08	CWP-08							
CWP-08 12/15/1998 350	CWP-08					_		
CWP-08	CWP-08	11/15/1998			300	***		
CWP-08	CWP-08	12/15/1998			350			
CWP-08	CWP-08	01/30/1999			270			
CWP-08	CWP-08	02/27/1999			250	•		
CWP-08	CWP-08	03/20/1999			110			
CWP-08	CWP-08	04/24/1999			100			
CWP-08	CWP-08	05/17/1999			44			
CWP-08	CWP-08	06/19/1999			49			
CWP-08	CWP-08	07/26/1999	-		44			
CWP-08	CWP-08					<30	46	
CWP-08			<5			<30		
CWP-08								
CWP-08								
CWP-08							l .	
CWP-08				_				
CWP-08							1	
CWP-08							1	
CWP-08	1			_				
CWP-08 06/17/2000 200 <250 3300 490 1255 CWP-08 07/17/2000 320 <10 8800 630 1567 CWP-08 08/15/2000 230 <10 6200 960 2616.13 CWP-08 09/15/2000 83 <10 8000 65 1904.84 CWP-08 10/04/2000 140 <10 7500 1500 3016.24 CWP-08 11/14/2000 <10 <10 29000 400 885.78 CWP-08 11/207/2000 28 <10 17000 300 664.3  CWP-09 09/20/1982 <4 <20 <20 160 32 18 CWP-09 03/21/1984 <5 <5 <5 CWP-09 01/20/1989 <20 CWP-09 01/25/1990 <20 CWP-09 01/25/1990 <20 CWP-09 01/25/1990 <5 CWP-09 01/15/1993 <5 CWP-09 01/15/1993 <5 CWP-09 01/15/1994 <5 CWP-09 01/15/1998 <5 CWP-09 01/15/1998 <5 CWP-09 01/15/1998 <5 CWP-09 01/15/1998 <5				_				
CWP-08 07/17/2000 320 <10 8800 630 1567 CWP-08 08/15/2000 230 <10 6200 960 2616.13 CWP-08 09/15/2000 83 <10 8000 65 1904.84 CWP-08 10/04/2000 140 <10 7500 1500 3016.24 CWP-08 11/14/2000 <10 <10 29000 400 885.78 CWP-08 12/07/2000 28 <10 17000 300 664.3  CWP-09 09/20/1982 <4 <20 <20 160 32 18 CWP-09 03/20/1984 53 <10							1	
CWP-08 08/15/2000 230 <10 6200 960 2616.13 CWP-08 09/15/2000 83 <10 8000 65 1904.84 CWP-08 10/04/2000 140 <10 7500 1500 3016.24 CWP-08 11/14/2000 <10 <10 29000 400 885.78 CWP-08 12/07/2000 28 <10 17000 300 664.3  CWP-09 09/20/1982 <4 <20 <20 160 32 18  CWP-09 03/20/1984 53 <10 CWP-09 03/21/1984 <5 <5 <5 CWP-09 01/20/1988 <20 CWP-09 01/24/1989 <20 CWP-09 01/25/1990 <20 CWP-09 01/25/1990 <5 CWP-09 01/15/1992 <5 CWP-09 01/15/1993 <5 CWP-09 01/15/1994 <5 CWP-09 01/15/1993 <5 CWP-09 01/15/1994 <5 CWP-09 01/15/1994 <5 CWP-09 01/15/1994 <5 CWP-09 01/15/1994 <5 CWP-09 01/15/1998 <5 CWP-09 01/15/1998 <5 CWP-09 01/15/1998 <5 CWP-09 10/15/1998 <5			_					
CWP-08 09/15/2000 83 <10 8000 65 1904.84 CWP-08 10/04/2000 140 <10 7500 1500 3016.24 CWP-08 11/14/2000 <10 <10 29000 400 885.78 CWP-08 12/07/2000 28 <10 17000 300 664.3  CWP-09 09/20/1982 <4 <20 <20 160 32 18  CWP-09 03/20/1984 53 <10  CWP-09 03/21/1984 <5 <5 <5  CWP-09 01/24/1989 <20  CWP-09 01/25/1990 <20  CWP-09 01/25/1990 <20  CWP-09 01/25/1990 <5  CWP-09 01/15/1992 <5  CWP-09 01/15/1993 <5  CWP-09 01/15/1994 <5  CWP-09 01/15/1994 <5  CWP-09 01/15/1994 <5  CWP-09 01/15/1998 <5  CWP-09 10/15/1998 <5								
CWP-08 10/04/2000 140 <10 7500 1500 3016.24 CWP-08 11/14/2000 <10 <10 29000 400 885.78 CWP-08 12/07/2000 28 <10 17000 300 664.3  CWP-09 09/20/1982 <4 <20 <20 160 32 18  CWP-09 03/20/1984 53 <10  CWP-09 03/21/1984 <5 <5 <5 <  CWP-09 01/20/1988 <20  CWP-09 01/24/1989 <20  CWP-09 01/25/1990 <20  CWP-09 01/23/1991 <5  CWP-09 01/15/1993 <5  CWP-09 01/15/1993 <5  CWP-09 01/15/1994 <5  CWP-09 01/15/1994 <5  CWP-09 01/15/1998 <5	CWP-08							
CWP-08 11/14/2000 <10 <10 29000 400 885.78 CWP-08 12/07/2000 28 <10 17000 300 664.3  CWP-09 09/20/1982 <4 <20 <20 160 32 18  CWP-09 03/20/1984 53 <10  CWP-09 03/21/1984 <5 <5 <5 <  CWP-09 01/20/1989 <20  CWP-09 01/25/1990 <20  CWP-09 01/25/1990 <20  CWP-09 01/25/1990 <20  CWP-09 01/25/1990 <5  CWP-09 01/15/1992 <5  CWP-09 01/15/1993 <5  CWP-09 01/15/1993 <5  CWP-09 01/15/1994 <5  CWP-09 01/15/1998 <5	CWP-08							
CWP-08 12/07/2000 28 <10 17000 300 664.3  CWP-09 09/20/1982 <4 <20 <20 160 32 18  CWP-09 03/20/1984 53 <10  CWP-09 03/21/1984 <5 <5 <5 <  CWP-09 01/20/1988 <20  CWP-09 01/25/1990 <20  CWP-09 01/25/1990 <20  CWP-09 01/25/1990 <5  CWP-09 01/25/1992 <5  CWP-09 01/15/1993 <5  CWP-09 01/15/1994 <5  CWP-09 01/15/1998 <5  CWP-09 01/15/1998 <5  CWP-09 10/15/1998 <5  CWP-09 10/15/1998 <5  CWP-09 10/15/1998 <5	CWP-08			_				
CWP-09 09/20/1982 <4 <20 <20 160 32 18  CWP-09 03/20/1984 53 <10  CWP-09 03/21/1984 <5 <5 <5  CWP-09 01/20/1988 <20  CWP-09 01/25/1990 <20  CWP-09 01/25/1990 <5  CWP-09 01/25/1992 <5  CWP-09 01/15/1993 <5  CWP-09 01/15/1994 <5  CWP-09 01/15/1994 <5  CWP-09 01/15/1998 <5								
CWP-09 03/20/1984 53 <10								
CWP-09 03/20/1984 53 <10	CWP-09	09/20/1982	<4	<20	<20	160	32	18
CWP-09 03/21/1984 <5 <5 <5	CWP-09						•	
CWP-09 01/20/1988	CWP-09							
CWP-09 01/25/1990 <20 CWP-09 01/23/1991 <5 CWP-09 01/15/1992 <5 CWP-09 01/15/1993 <5 CWP-09 01/15/1994 <5 CWP-09 10/15/1994 <5 CWP-09 10/15/1998 <5	CWP-09							
CWP-09 01/23/1991 <5 CWP-09 01/15/1992 <5 CWP-09 01/15/1993 <5 CWP-09 01/15/1994 <5 CWP-09 10/15/1998 <5	CWP-09	01/24/1989			<20			
CWP-09 01/15/1992 <5 CWP-09 01/15/1993 <5 CWP-09 01/15/1994 <5 CWP-09 10/15/1998 <5	CWP-09	01/25/1990			<20			
CWP-09 01/15/1993 <5 CWP-09 01/15/1994 <5 CWP-09 10/15/1998 <5	CWP-09	01/23/1991			<5			
CWP-09 01/15/1994 <5 CWP-09 10/15/1998 <5	CWP-09	01/15/1992			<5			
CWP-09 10/15/1998 <5	CWP-09	01/15/1993			<5	-		
<b>\</b>	CWP-09	01/15/1994			<5	-		
CWP-09 08/27/1999 <5 <5 <30 17	CWP-09	10/15/1998			<5			***
	CWP-09	08/27/1999	্ত		<5	<30	17	

#### Historical Groundwater Monitoring Results

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·····	<u> </u>	Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	
		(μg/l)	(μg/l)	(µg/l)	(μg/l)	(mg/L)	(mg/L)
CWP-09	12/17/1999	<10		<10	<10	17	28
CWP-09	04/10/2000	<10		11	<10	19	28.39
CWP-09	10/04/2000	<10		17	180	18	29
CWP-10	09/20/1982	<4	<20	<20	700	16.4	18
CWP-10	06/16/1983	- 7		70			
CWP-10	12/08/1983		2700	5800	_		
CWP-10	01/24/1984	15	170	170			
CWP-10	03/01/1984	42	18000	18000			
CWP-10	03/21/1984	1800	41000	50000			-
CWP-101	12/21/1999	<10	·	120	860	12	30.87
CWP-101	04/08/2000	<10		<10	1100	15	21.04
CWP-101	07/17/2000	<10		77	1300	15	30.75
CWP-101	10/05/2000	<10		<10	1600	530	1845.17
CWP-102	09/13/1999			50	_		
CWP-102	12/21/1999	<10		<10	110	150	363
CWP-102	04/08/2000	<10		<10	1000	190	679.78
CWP-102	07/18/2000	<10		<10	600	200	867.5
CWP-102	10/05/2000	<10		81	840	14	35.72
CWP-103	07/19/1999	2.6		1100	120	34	
CWP-103	07/20/1999	3.5	_	3600	79	30	
CWP-103	08/27/1999	12		560	<30	28	
CWP-103	12/21/1999	93	<del></del>	600	5700	620	1600
CWP-103	04/08/2000	1100		140000	5600	100	585.13
CWP-103	07/18/2000	160		<10	-0.52	1.8	1490
CWP-103	10/05/2000	210		<500	<500	2000	3238.07
CWP-104	07/19/1999	<2		9600	<30	26	_
CWP-104	07/20/1999	<2		10000	<30	22	
CWP-104	08/27/1999	<5		9900	<30	23	
CWP-104	12/21/1999	460		<500	<500	17000	4900
CWP-104	04/08/2000	330		<10	<10	4260	1449
CWP-104	07/18/2000	54		<10	-0.086	1.6	3300
CWP-104	10/05/2000	13500		1200	340	480	938.52
~~~	00 100 11 000		**				
CWP-11 CWP-11	09/28/1982	<4	<20	50	10	53.6	31
CWP-11	06/16/1983 08/13/1983	18	50	40 50		-	
CWP-11	10/04/1983	950	70	1900			
CWP-11	12/08/1983	950	40	50			
CWP-11	01/06/1984		30	50			_
CWP-11	01/24/1984		30	30			
CWP-11	02/01/1984		40	<50			
CWP-11	03/01/1984	-	30	30			
CWP-11	03/21/1984			16		_	
CWP-11	04/02/1984		40	40			
CWP-11	06/16/1984			40			
CWP-11	12/04/1984	10	<20	<20			
CWP-11	01/03/1985	-	20	20			
CWP-11	01/30/1985			<20			
CWP-11	03/01/1985			<20		_	
CWP-11	04/01/1985	_	_	20		_	_
CWP-11	05/03/1985			<20		_	
CWP-11	07/02/1985			<20			
CWP-11	12/04/1985			<20			
CWP-11	01/02/1986			<20	1		
CWP-11	02/13/1986			<20	-	_	
CWP-11	03/14/1986			<20			
CWP-11	04/03/1986			<20			
CWP-11	05/01/1986			<20			
CWP-11	08/13/1986		•	<20			
CWP-11	09/03/1986	· · · · · · · · · · · · · · · · · · ·		<20			

Historical Groundwater Monitoring Results

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		Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	
		(μ g/ l)	(μg/l)	(μg/l)	(μg/l)	(mg/L)	(mg/L)
CWP-11	10/06/1986			<20			
CWP-11	01/05/1987		_	<20		_	
CWP-11	02/25/1987	-		<20		_	
CWP-11	03/27/1987	-		<20			-
CWP-11	04/20/1987			<20	-]		
CWP-11	05/19/1987			<20			_
CWP-11	05/20/1987	-		<20			_
CWP-11	06/16/1987		_	<20			
WP-11	07/21/1987	***		<20 -20		_	
WP-11	08/24/1987			<20		_	
CWP-11	09/23/1987			<20		-	
WP-11	12/18/1987			<20		-	
CWP-II	01/18/1988			<20			
WP-11	02/18/1988	_		<20 ~30			
WP-11	03/21/1988			<20 ∠20			
CWP-11 CWP-11	04/22/1988 05/23/1988			<20 <20		1	
WP-11	05/23/1988			<20 <20		_	
WP-11	07/19/1988			<20 <20			
.wr-11 :WP-11	08/23/1988			<20 <20	- i		
.wr-11 :WP-11	09/19/1988			<20 <20			_
WP-11	11/21/1988			<20			
WP-11	12/23/1988			<20			
WP-11	01/24/1989			<20			
WP-11	02/20/1989			<20			
WP-11	03/21/1989	•••		<20			
WP-II	04/28/1989			<20		_	•
WP-11	05/22/1989			<20			
WP-11	06/28/1989			<20			
WP-11	07/25/1989			<20			
WP-11	10/26/1989			<20			
WP-11	01/23/1990			<20			
WP-11	02/21/1990			<20			
WP-11	03/21/1990			<20			
WP-11	04/23/1990	-		<20			
WP-11	05/23/1990			<20			
WP-11	06/22/1990		-	<20			
WP-11	07/26/1990			<20			
WP-11	08/23/1990			<20		-	
WP-11	12/27/1990		_	<5			
WP-11	01/23/1991			<5	-		
WP-11	04/26/1991		•	< ব			
WP-11	07/29/1991	***		<5			-
WP-11	01/15/1992			্ ক			
WP-11	04/15/1992			<5 .*			***
WP-11 WP-11	07/15/1992			<5			
WP-11	10/15/1992			<5		-	_
WP-11	01/15/1993 04/15/1993			<5 -5			
.WP-11 :WP-11	04/15/1993			- -ঠ			
WP-11	10/15/1993						
WP-11	01/15/1994			<5 <5			
WP-11	01/15/1994			చ చ			
WP-11	01/15/1998			ঠ ঠ			
WP-11	08/15/1998			ళ త			
WP-11	10/15/1998			చ చ			_
WP-II	01/30/1999			చ చ		_	
WP-11	08/27/1999	<5		ঠ ঠ	<30	30	_
WP-11	12/17/1999	<10		<10	<30 41	34	26
WP-11	04/10/2000	<10		<10	<10	21	20 32.68
WP-11	10/04/2000	<10		<10	290	21 29	11.32
	10.0 112000	~10		~10	-~	٠,	•1.52
WP-12	09/20/1982	<4	<20	<20	560	15.4	8
WP-12	09/28/1982	<4	<20	<20			
WP-12	06/16/1983	27		<20			

Historical Groundwater Monitoring Results

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			Page 19 01 33				
	T	Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	
		(μg/l)	(μg/l)	(μg/l)	(µg/1)	(mg/L)	(m g/ L)
CWP-12	10/04/1983	63	<50	47	_		
CWP-12	12/08/1983	<50	<10	<50			
CWP-12	03/01/1984	<4	<20	<20			
CWP-12	03/20/1984	32		<10			
CWP-12	01/30/1985			<20	-	,	
CWP-12	08/01/1985	- 5	_	<20	_	. *	
CWP-12	10/31/1985	-		<20			•
CWP-12	02/13/1986		_	<20		~-	
CWP-12	05/01/1986			<20			
CWP-12	08/13/1986			<20			
CWP-12 CWP-12	04/20/1987 07/21/1987			<20 <20			
CWP-12	10/19/1987			<20			
CWP-12	01/18/1988			<20			
CWP-12	04/22/1988		-	<20			
CWP-12	07/18/1988	· ,		<20			
CWP-12	10/24/1988		_	<20			-+-
CWP-12	01/24/1989		·	<20			
CWP-12	04/28/1989		_	<20			
CWP-12	07/25/1989		. –	<20			•
CWP-12	10/25/1989		_	<20			
CWP-12	01/23/1990	<u></u>	_	<20			
CWP-12	04/23/1990			<20			
CWP-12	07/25/1990		-	<20			
CWP-12	07/26/1990	- <u>-</u> _	_	<20			
CWP-12	10/24/1990			<20			
CWP-12	01/23/1991		-	<5			
CWP-12	01/15/1992			<			
CWP-12 CWP-12	01/15/1993 01/15/1994	<u> </u>		ব ব			
CWP-12	10/15/1998		_	ব্			
CWP-12	08/27/1999	ა ა		7.5	<30	18	
CWP-12	12/17/1999	<10		18	<10	18	76
CWP-12	04/10/2000	<10		14	<10	17	78.72
CWP-12	10/04/2000	<10		<10	<10	20	74.76
CWP-13	09/20/1982	<4	<20	20	3480	27.3	27
CWP-13	06/16/1983	1.00_0		<20			
CWP-13	12/08/1983	<50	<10	<50			
CWP-13	01/24/1984	ර	<10	<10			
CWP-13	03/01/1984	<4	<20	<20	***		
CWP-13 CWP-13	03/21/1984 01/30/1985		_	81 <20	<u>-</u> [
CWP-13 CWP-13	03/01/1985			<20 <20			
CWP-13	04/01/1985			<20			
CWP-13	05/03/1985			<20			
CWP-13	07/02/1985		_	<20			
CWP-13	08/01/1985	;- "		<20			
CWP-13	09/09/1985			<20			
CWP-13	10/01/1985		_	<20	1		
CWP-13	10/21/1985			<20	[
CWP-13	12/04/1985			<20			
CWP-13	01/02/1986			<20		*	
CWP-13	02/13/1986			<20			
CWP-13	03/14/1986			<20			_
CWP-13	04/03/1986			<20			_
CWP-13	05/01/1986			<20			
CWP-13	08/13/1986			<20			
CWP-13	09/03/1986	-		<20	1		
CWP-13	10/06/1986		•••	<20 -20	- 1		
CWP-13	12/03/1986	_		<20 <20			
CWP-13 CWP-13	01/05/1987 02/25/1987	_		<20 <20			***
CWP-13	02/23/1987	_		<20 <20	I		
CWP-13	03/27/1987			<20			
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1	<u> </u>	Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	Surface
		(μg/l)	(μ g/ l)	(μg/l)	(μg/l)	(mg/L)	(mg/L)
CWP-13	05/19/1987		***	<20		*	**************************************
CWP-13	05/20/1987			<20			
CWP-13	06/06/1987		**-	<20			
CWP-13	07/21/1987			<20			
CWP-13	08/24/1987			<20			
CWP-13	09/23/1987			<20			
CWP-13 CWP-13	10/19/1987 11/13/1987		•	<20 <20			
CWP-13	12/18/1987			<20			
CWP-13	01/18/1988			<20			
CWP-13	02/18/1988			<20	_		
CWP-13	03/21/1988			<20			
CWP-13	04/22/1988			<20			
CWP-13	05/23/1988			<20		-	
CWP-13	06/23/1988			<20			-
CWP-13	07/19/1988			<20			- 1
CWP-13 CWP-13	08/23/1988 09/19/1988			<20 <20			
CWP-13	10/24/1988			<20 <20			
CWP-13	11/21/1988			<20			
CWP-13	12/23/1988			<20			
CWP-13	01/24/1989			<20			
CWP-13	02/20/1989			<20			
CWP-13	03/21/1989			<20			
CWP-13	04/28/1989			<20			
CWP-13	05/22/1989			<20 -20			
CWP-13 CWP-13	06/28/1989 07/25/1989			<20 <20			
CWP-13	08/29/1989			<20			
CWP-13	09/22/1989	_		<20			
CWP-13	10/25/1989			<20			
CWP-13	11/21/1989			<20			
CWP-13	12/21/1989	_		<20			
CWP-13	01/23/1990			<20			
CWP-13	02/21/1990			<20	[
CWP-13 CWP-13	03/21/1990			<20 <20			
CWP-13	04/23/1990 05/23/1990			<20			
CWP-13	06/22/1990			<20			
CWP-13	07/26/1990			<20			
CWP-13	08/23/1990			<20			
CWP-13	08/24/1990			<20			
CWP-13	09/20/1990			<20			
CWP-13	10/23/1990			<20			
CWP-13	12/27/1990			<5			
CWP-13 CWP-13	01/23/1991 04/26/1991			<5 <5			
CWP-13	07/29/1991			্ত ব্			
CWP-13	10/24/1991			ব			
CWP-13	01/15/1992			હ			
CWP-13	04/15/1992			<5			
CWP-13	07/15/1992			<5	-		
CWP-13	10/15/1992			<			
CWP-13	01/15/1993			<5			
CWP-13	04/15/1993			<5			
CWP-13	07/15/1993			<5			
CWP-13 CWP-13	10/15/1993 01/15/1994			<5 <5			_
CWP-13	05/15/1994			্ ব			
CWP-13	03/13/1994			<5			_
CWP-13	11/15/1994			<5			
CWP-13	02/15/1995		***	<5			
CWP-13	05/15/1995			<5			
CWP-13	01/15/1998			<5			
CWP-13	02/15/1998			্ ব			

Historical Groundwater Monitoring Results

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,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	7	Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	00.1210
0.72		(μg/l)	(μg/l)	(μg/l)	(μg/l)	(mg/L)	(mg/L)
CWP-13	05/15/1998		-	<5			
CWP-13	08/15/1998			<			
CWP-13	10/15/1998		_	<5			
CWP-13	01/30/1999			<5			
CWP-13	02/27/1999			<5			
CWP-13	05/17/1999			<5			
CWP-13	08/27/1999	<5	••-	ব	1600	22	
CWP-13	12/17/1999	<10		<10	2100	85	194
CWP-13	04/10/2000	<10		<10	2600	49	100.01
CWP-13	07/17/2000	<10		<10	2400	54	119.4
CWP-13	10/04/2000	<10		<10	5100	190	305.49
CWP-14	09/20/1982	<4	<20	<20	2960	16.7	14
CWP-14	06/16/1983			<20			
CWP-14	10/04/1983	64	<50	50		_	
CWP-14	12/08/1983	<50	<10	<50			
CWP-14	03/01/1984	<4	<20	<20	}	_	
CWP-14	03/21/1984	_		<10			•••
CWP-14	01/30/1985			<50			
CWP-14	05/03/1985	_		<20			
CWP-14	08/01/1985	_		<20 -20	- 1		
CWP-14	10/31/1985	_		<20			
CWP-14 CWP-14	02/13/1986			<20 <20		_	
CWP-14	05/01/1986 08/13/1986			<20			
CWP-14	04/20/1987			<20			
CWP-14	07/21/1987			<20			
CWP-14	10/01/1987			<20			
CWP-14	01/18/1988			<20			
CWP-14	04/22/1988			<20			
CWP-14	07/19/1988			<20			
CWP-14	10/24/1988			<20			
CWP-14	01/24/1989			<20			
CWP-14	04/28/1989			<20			
CWP-14	07/25/1989			<20	- 1	_	
CWP-14	10/25/1989		•	<20]	_	
CWP-14	01/23/1990			<20			
CWP-14	04/24/1990	_		<20			
CWP-14	07/25/1990			<20		_	
CWP-14	07/26/1990			<20			
CWP-14	10/24/1990			<20			
CWP-14	01/23/1991	_		<5		-	
CWP-14	01/15/1992			<5			
CWP-14	01/15/1993	_		<5	1		
CWP-14	01/15/1994			<5 -*			
CWP-14 CWP-14	10/15/1998	 		<5 <5	940	22	
CWP-14 CWP-14	08/27/1999 12/17/1999	<5 <10		<5 <10	840 2000	22 49	161
CWP-14	04/10/2000	<10 17		<10 <10	2900	49 400	161 1190
CWP-14 CWP-14	10/04/2000	<10		<10	1800	400 34	61.3
₩ *** * * * * * * * * * * * * * * * * *		<10		×10	1000	J -1	01.3
CWP-15	09/20/1982	<4	<20	<20	10	41.4	35
CWP-15	03/21/1984			<10		-	
CWP-15	01/18/1988		_	<20		_	
CWP-15	01/24/1990		_	<20	#		
CWP-15	01/25/1990			<20			
CWP-15	12/17/1999	<10		<10	44	20	31
CWP-15	04/10/2000	<10		<10	15	22	25.72
CWP-15	10/04/2000	<10		<10	150	17	16.96
					1		
CWP-16	09/28/1982	<4	<20	<20	360	27.3	30
CWP-16	03/21/1984			<10	1		
CWP-16	01/18/1988			<20			
CWP-16	01/24/1989			<20			
CWP-16	01/25/1990			<20	i i		

Historical Groundwater Monitoring Results

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***************************************		Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	
_		(µg/l)	(μg/l)	(μ g/ l)	(μg/l)	(mg/L)	(m g /L)
CWP-16	12/17/1999	<10	_	<10	43	23	26
CWP-16	04/10/2000	<10		<10	34	26	24.72
CWP-16	10/04/2000	<10	_	<10	<10	5.9	3.25
						1	
CWP-17	01/31/1985	<10	<10	<10			
CWP-17	03/01/1985			<20		-	
CWP-17	04/01/1985			<20			
CWP-17	05/03/1985			<20			
CWP-17	07/02/1985			<20			
CWP-17	08/01/1985		-	<20		_	
CWP-17	09/09/1985			<20		-	
CWP-17	10/01/1985			<20			
CWP-17	10/31/1985			<20			
CWP-17	12/04/1985			<20 -20			
CWP-17	01/02/1986			<20 -20			_
CWP-17	02/13/1986			<20 -20			
CWP-17 CWP-17	03/14/1986 04/03/1986			<20 <20			
CWP-17 CWP-17	05/01/1986			<20 <20			
CWP-17	08/13/1986		***	<20			
CWP-17	09/03/1986			<20			
CWP-17	10/06/1986			<20			•••
CWP-17	12/03/1986	•••		<20			
CWP-17	01/05/1987			<20			
CWP-17	02/25/1987			<20			
CWP-17	03/27/1987			<20			
CWP-17	04/20/1987			<20			
CWP-17	05/19/1987			<20			
CWP-17	05/20/1987			<20			
CWP-17	07/21/1987			<20			
CWP-17	10/19/1987			<20			
CWP-17	01/18/1988			<20			
CWP-17	04/25/1988			<20			
CWP-17	07/19/1988			<20			
CWP-17	01/24/1989			<20			
CWP-17	04/23/1989			<20			
CWP-17	07/25/1989			<20			
CWP-17	10/25/1989	_		<20			***
CWP-17	01/23/1990			<20			
CWP-17	04/23/1990			<20			
CWP-17	07/26/1990			<20			
CWP-17 CWP-17	10/24/1990 01/23/1991		_	<20 <5			
CWP-17	01/23/1991			ত ত			
CWP-17	01/15/1993			ত ত			
CWP-17	01/15/1994			ধ			_
CWP-17	10/15/1998			<u> </u>		***	
CWP-17	08/27/1999	7.9		ত	<30	19	
CWP-17	12/17/1999	<10		<10	430	13	5
CWP-17	04/10/2000	<10		<10	870	24	5.02
CWP-17	10/04/2000	<10		<10	1200	29	3 14
CWP-18	04/20/1987			12000			
CWP-18	07/22/1987			23000	_		-
CWP-18	10/20/1987			22000			
CWP-18 CWP-18	01/18/1988 04/25/1988			37000	**-		-
CWP-18	04/25/1988 07/19/1988			31000 18000			*
CWP-18	01/26/1989			38000			
CWP-18	04/28/1989			35000			
CWP-18	07/26/1989			15000			
CWP-18	10/25/1989			27000			
CWP-18	01/25/1990			20000			

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		Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	55
5112	DAIL		+	(μ g /l)		(mg/L)	(mg/L)
CAUD 10	J	(μ g/ l)	(μg/l)		[(μg/l) [, , , , , , , , , , , , , , , , , , ,	(11872)
CWP-18	04/24/1990			9660			
CWP-18	07/25/1990			20000			
CWP-18	08/27/1999	11		13000	<30	14	
CWP-18	10/22/1999			10000		21	110
CWP-18	12/21/1999	<10		2600	930	24	146
CWP-18	04/08/2000	<10		10000	220	18	206
CWP-18	07/17/2000	15		<10	4900	46	265 12
CWP-18	10/05/2000	<10		<10	3600	32	188.13
CWP-20	12/03/1986			<20		-	
CWP-20	01/05/1987			<20			
CWP-20	02/25/1987			<20			
CWP-20	03/26/1987	 .		20			
CWP-20	04/20/1987			<20			
CWP-20	05/19/1987	·		<20			
CWP-20	05/20/1987			<20		_	
CWP-20	06/16/1987		***	<20			
CWP-20	07/21/1987			<20			_
CWP-20	08/24/1987	<u> </u>	-	<20			
CWP-20	09/23/1987			<20			
CWP-20	10/19/1987		•••	<20			
CWP-20	11/13/1987			<20			
CWP-20	12/21/1987			<20	_		
CWP-20	01/18/1988	_		<20			
CWP-20	02/18/1988			90			
CWP-20	03/21/1988			<20			
CWP-20	04/25/1988			50		-	
CWP-20	05/23/1988		_	60		_	
			-				
CWP-20	06/23/1988			20			
CWP-20	07/19/1988			<20			
CWP-20	08/23/1988	***		<20			
CWP-20	09/19/1988	— iji.	· . • • • • • • • • • • • • • • • • • •	<20			
CWP-20	10/24/1988			<20			
CWP-20	11/21/1988			<20		_	
CWP-20	12/23/1988	_	_	<20			
CWP-20	01/25/1989	 ,		160			
CWP-20	02/21/1989			70	-		
CWP-20	03/21/1989			.50			
CWP-20	04/27/1989			430			
CWP-20	05/22/1989			50			
CWP-20	06/28/1989	_		<20	- :	-	
CWP-20	07/26/1989	_		3100			
CWP-20	08/29/1989			2700			
CWP-20	09/22/1989			1100			
CWP-20	10/26/1989			<20			
CWP-20	11/21/1989		***	710			-
CWP-20	12/21/1989		· ··	20			
CWP-20	01/22/1990			20			
CWP-20	02/21/1990			520			
CWP-20	03/21/1990			700			
CWP-20	04/23/1990			74			
CWP-20	05/23/1990			<20			
CWP-20	08/23/1990			32			
CWP-20	09/20/1990			<20			
CWP-20	12/27/1990			10			
CWP-20	02/25/1991		_	<5			
CWP-20	03/26/1991		_	ও ও		_	
CWP-20	03/26/1991				4		
	04/26/1991			101			
CWP-20			-	<5			
CWP-20	06/25/1991		_	3130			
CWP-20	07/29/1991	_		3700			
CWP-20	08/26/1991		-	3750			
CWP-20	09/27/1991		-	98			•••
CWP-20	10/24/1991			<5			
CWP-20	11/25/1991			<5			

Historical Groundwater Monitoring Results

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		Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	
L		(μg/l)	(μg/l)	(μg/l)	(µg/l)	(mg/L)	(mg/L)
CWP-20	12/23/1991			ঠ			
CWP-20	01/15/1992			194			
CWP-20	02/15/1992			<5			
CWP-20	03/15/1992			<5			
CWP-20	04/15/1992			8			
CWP-20	05/15/1992			44	-		-
CWP-20	06/15/1992			17			
CWP-20	07/15/1992			8			
CWP-20	12/15/1992			12			
CWP-20	01/15/1993			<5			
CWP-20	02/15/1993			19		_	
CWP-20	03/15/1993			5.1			
CWP-20 CWP-20	04/15/1993			6.5			
CWP-20	05/15/1993 06/15/1993			ক ক			
CWP-20	07/15/1993			ব			
CWP-20	08/15/1993			ব			
CWP-20	09/15/1993			13			
CWP-20	10/15/1993			47			
CWP-20	11/15/1993			53			
CWP-20	12/15/1993			33 11			
CWP-20	01/15/1994			195			
CWP-20	02/15/1994			22			
CWP-20	03/15/1994			150			
CWP-20	04/15/1994			11			
CWP-20	05/15/1994			14			
CWP-20	06/15/1994			7.2			
CWP-20	07/15/1994			14			
CWP-20	08/15/1994			13			
CWP-20	09/15/1994			9.5			
CWP-20	10/15/1994		_	8.4			
CWP-20	11/15/1994			9.1			
CWP-20	12/15/1994			54			
CWP-20	01/15/1995			30			*
CWP-20	02/15/1995			5.2			
CWP-20	03/15/1995			200			
CWP-20	04/15/1995			<5			
CWP-20	05/15/1995			320			
CWP-20	06/15/1995		_	390			
CWP-20	07/15/1995	27					
CWP-20	12/15/1996	8					
CWP-20	06/15/1997	7					
CWP-20	07/15/1997	6		22			
CWP-20 CWP-20	01/15/1998			23	***		
CWP-20 CWP-20	02/15/1998 03/15/1998			9.7 16			
CWP-20 CWP-20	03/15/1998			_			
CWP-20	04/15/1998			<5 140		· · ·	
CWP-20	06/15/1998			260			
CWP-20	07/15/1998			260 340			
CWP-20	08/15/1998	_		1900			
CWP-20	09/15/1998	_		2000			
CWP-20	10/15/1998			480			
CWP-20	11/15/1998			5.5			
CWP-20	12/15/1998			88			
CWP-20	01/30/1999		•••	18			
CWP-20	02/27/1999			13			
CWP-20	03/20/1999			19			
CWP-20	04/24/1999			26			
CWP-20	05/17/1999	***		<5			
CWP-20	06/19/1999			ব			
CWP-20	07/26/1999			8.2			
CWP-20	08/27/1999	<5		520	160	76	
CWP-20	09/11/1999	<5		450	150	73	
	10/22/1999			7		67	-0.031

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		Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITÉ	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	
	l i	(μg/l)	(μg/l)	(μg/l)	(μg/l)	(mg/L)	(mg/L)
CWP-20	11/19/1999	<10		<10	49	2.2	2.5
CWP-20	12/21/1999	<10		<10	28	8.1	16.92
CWP-20	01/21/2000	<10		<10	56	3	2
CWP-20	02/14/2000	<10	***	<10	100	3	2
CWP-20	03/17/2000	<10		<10	110	1	2
CWP-20	04/08/2000	<10		<10	150	4.9	10.88
CWP-20	05/20/2000	<10		<10	57	3.6	<1000
CWP-20	06/17/2000	<10		<250	<250	<50000	22
CWP-20	07/17/2000	<10		<10	140	11	26.14
CWP-20	08/15/2000	<10		<10	200	13	49.025
CWP-20	09/15/2000	<10	-	<50	71	21	28.63
CWP-20	10/04/2000	<10	-	16	170	19	25.42
CWP-20	11/14/2000	<10		<10	29	<1000	3.22
CWP-20	12/07/2000	<10		<10	110	6	4.94
CWP-21	12/03/1986	_	-	<20			
CWP-21	01/05/1987			<20	-		
CWP-21	02/25/1987	-		<20			
CWP-21	03/26/1987			<20		-	
CWP-21	04/20/1987			<20		_	
CWP-21 CWP-21	05/19/1987			<20 <20			
CWP-21	05/20/1987 06/16/1987			<20	-		
CWP-21	07/21/1987			<20		_	•
CWP-21	08/24/1987			<20			
CWP-21	09/23/1987		***	<20			
CWP-21	10/19/1987			<20			
CWP-21	11/13/1987			<20		_	
CWP-21	12/21/1987		-	<20			
CWP-21	01/18/1988			<20			
CWP-21	02/18/1988		_	<20			
CWP-21	03/21/1988		_	<20			
CWP-21	04/22/1988			<20			
CWP-21	05/23/1988		-	<20			
CWP-21	06/23/1988		-	<20			
CWP-21	07/19/1988		_	<20			
CWP-21	08/23/1988		-	<20	-	-	
CWP-21	09/19/1988			<20			
CWP-21	10/24/1988			<20			
CWP-21	11/21/1988			<20			
CWP-21	12/23/1988		_	<20			
CWP-21	01/25/1989			<20			
CWP-21 CWP-21	02/21/1989			<20			
CWP-21	03/21/1989 04/27/1989			<20 <20	-		
CWP-21	05/22/1989			<20		_	
CWP-21	05/22/1989			<20	_	_	
CWP-21	07/26/1989	•••		<20			
CWP-21	08/29/1989	***		<20			
CWP-21	09/22/1989			<20			
CWP-21	10/26/1989			<20			
WP-21	11/21/1989			<20			
WP-21	12/20/1989		***	<20			_
WP-21	12/21/1989			<20			
WP-21	01/22/1990			<20			
WP-21	02/21/1990			<20			
WP-21	03/21/1990			<20			
CWP-21	04/23/1990	_		<20			
CWP-21	05/23/1990			<20			
WP-21	06/22/1990			<20			_
CWP-21	07/26/1990	_		<20			
CWP-21	08/23/1990			<20			
WP-21	09/20/1990	-		<20			
CWP-21	10/23/1990			<20			-
WP-21	11/26/1990		•••	<20			

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			3					
SITE	DATE	Arsenic Dissolved	Chromium (Hexavalent)	Chromium Dissolved	Manganese Dissolved	Calcium Dissolv e d	Sulfate	
3112		(μg/l)	(μg/I)	(μ g/ l)	(μg/I)	(mg/L)	(mg/L)	
CWP-21	12/27/1990			ح.				
CWP-21	01/23/1991			<5				
WP-21	02/25/1991			<5				
WP-21	03/26/1991		***	<5				
WP-21	04/26/1991			<5				
WP-21	05/28/1991		***	<5			_	
WP-21	06/25/1991			<5				
WP-21	07/29/1991			<5				
WP-21	08/26/1991			<5				
WP-21	09/27/1991			<5				
WP-21	10/24/1991			<5				
WP-21	11/25/1991			<5	•			
WP-21	12/23/1991			<5				
WP-21	01/15/1992			<5				
WP-21	02/15/1992			<5				
WP-21	03/15/1992			<5				
WP-21	04/15/1992			<5			~~	
WP-21	05/15/1992	_		<5				
WP-21	06/15/1992		***	<5				
WP-21	07/15/1992			<5				
WP-21	08/15/1992		-	<5				
WP-21	09/15/1992			<5				
WP-21	10/15/1992		-	<5				
WP-21	11/15/1992			<5				
WP-21	12/15/1992	_		<5				
WP-21	01/15/1993			<5				
WP-21	02/15/1993	•••		<5 .*		*		
WP-21	03/15/1993	•••		<5				
WP-21 WP-21	04/15/1993			ধ ধ				
WP-21	05/15/1993 06/15/1993			<5				
WP-21	07/15/1993			<5				
WP-21	08/15/1993			্ ত				
WP-21	09/15/1993			<5				
WP-21	10/15/1993			<5				
WP-21	11/15/1993			<5		***		
WP-21	12/15/1993	_		8				
WP-21	01/15/1994			<5				
WP-21	02/15/1994			<5				
WP-21	03/15/1994			<5				
WP-21	04/15/1994			<5	•••			
WP-21	05/15/1994			<5				
WP-21	06/15/1994			<5				
WP-21	07/15/1994			<5		_		
WP-21	08/15/1994			<5		_	***	
WP-21	09/15/1994			<5				
WP-21	10/15/1994			<5				
WP-21	11/15/1994			<5				
WP-21	12/15/1994			8				
WP-21	01/15/1995	-		93				
WP-21	02/15/1995			241				
WP-21	03/15/1995			330				
WP-21	04/15/1995			1284			_	
WP-21	05/15/1995	_		500	1		_	
WP-21	06/15/1995			2800				
WP-21	07/15/1995	<5						
WP-21	12/15/1996	11						
WP-21	06/15/1997	23	-					
WP-21	07/15/1997	<5	_					
WP-21	01/15/1998		_	<5				
WP-21	02/15/1998			7.3				
	03/15/1998			6				
TWP-21 TWP-21 TWP-21	04/15/1998 05/15/1998			<5 8.8				

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		Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	
		(h8\I)	(µg/I)	(μg/l)	(μ g/ I)	(mg/L)	(mg/L)
WP-21	07/15/1998	-		<5		-	
CWP-21	08/15/1998			<5			
CWP-21	09/15/1998			17	[_	
WP-21	10/15/1998			8.5			
WP-21	11/15/1998			16			
WP-21	12/15/1998			<			
WP-21	01/30/1999			<5	•		
WP-21	02/27/1999	•••		5.9			
TWP-21	03/20/1999		***	5.9			
WP-21	04/24/1999	***		< 5			
WP-21	05/17/1999			ح.		_	
WP-21	06/19/1999		_	<5 5.8			
CWP-21	07/26/1999	<5	_	ა.ა <ქ	48	 12	
CWP-21 CWP-21	08/27/1999 09/11/1999	্ ব	•••	7.2	<30	12	
WP-21	10/22/1999			ر. ح5		18	28
WP-21	11/19/1999	33	_	<10	<10	5.4	18
WP-21	12/21/1999	-35 <10		<10	48	23	36.69
WP-21 WP-21	01/21/2000	18		<10	46 <10	32	36.69 7
CWP-21	02/14/2000	67		84	19	20	3
WP-21	03/17/2000	<10		<10	38	21	33
WP-21	04/08/2000	<10		<10	270	29	93.32
WP-21	05/20/2000	18		<10	<10	48	<1000
WP-21	06/17/2000	14		<10	53	28	94.08
WP-21	07/17/2000	<10		<10	320	27	80.39
WP-21	08/15/2000	<10		<10	270	28	68.825
WP-21	09/15/2000	19		<10	150	21	50.075
WP-21	10/04/2000	<10		<10	130	20	44.94
WP-21	11/14/2000	57		20	500	39	33.29
WP-21	12/07/2000	18		18	330	26	34.19
WP-22	01/06/1987			<20			
WP-22	02/25/1987	_		<20			
WP-22	03/27/1987	_	_	<20			
WP-22	04/20/1987			<20			
WP-22	05/19/1987			<20		***	
WP-22	05/20/1987			<20			
WP-22	10/15/1998			28	[
WP-22	08/27/1999	ব		14	<30	22	
WP-22	12/17/1999	40		16	17000	150	577
WP-22	04/10/2000	17		<100	13000	480	1448.16
WP-22	10/04/2000	<10		41	18000	190	586.5
WP-25	9/20/1982	<4	<20	<20	10	44.5	40
WP-26	9/20/1982	<4	<20	<20	<10	16.4	7
PT-01A	09/28/1982	<4	<20	<20	<10	24.6	18
PT-01A	05/18/1983	ব	<40	<40			
PT-01A	03/21/1984		_	<10	-		
PT-01B	09/28/1982	<4	<20	<20	80	22.3	16
PT-01B	05/18/1983	<5	<40	<40			
PT-01B	03/21/1984		<40	<10			
PT-02A	01/22/1990			<20			
PT-02B	05/18/1983	ধ	<40	<40			
PT-02B	03/21/1984	<5	ব	<5			
PT-02B	01/19/1988			<20			
PT-02B	01/26/1989			<20			

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		Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	
		(μ g/ I)	(μg/l)	(µg/l)	(μ g/ 1)	(m g /L)	(m g /L)
FPT-03	09/20/1982	<4	480	480	210	22	16
FPT-03	05/18/1983		170	170			
FPT-03	06/16/1983			210			
FPT-03	08/13/1983		620	650			***
FPT-03	10/04/1983	41	440	1400			
FPT-03	12/08/1983		110	120			
FPT-03	01/06/1984		60	60	-		
FPT-03	01/18/1984		90	120			
FPT-03	01/24/1984		160	160		***	
FPT-03	02/01/1984		200	200			
FPT-03	03/01/1984		100	100			
FPT-03	03/21/1984	-	98 130	120			
FPT-03 FPT-03	04/02/1984 12/04/1984		80	160 80			
FPT-03	01/03/1985		350	350			
FPT-03	01/30/1985			120			•••
FPT-03	03/01/1985			110			
FPT-03	04/01/1985			100			
FPT-03	05/03/1985			<20			
FPT-03	07/02/1985			<20			
FPT-03	08/01/1985			<20			
FPT-03	09/09/1985			70			
FPT-03	09/20/1985			<20			
FPT-03	10/01/1985			<20			
FPT-03	10/31/1985		_	<20			
FPT-03	12/04/1985			20			
FPT-03	01/02/1986			60			
FPT-03	02/13/1986		_	<10			
FPT-03	03/14/1986			<20			
FPT-03	05/01/1986			<20			
FPT-03	08/13/1986	_		<20			
FPT-03	09/03/1986	~~~		<20			
FPT-03	10/06/1986			<20			
FPT-03	12/03/1986			<20			
FPT-03	01/05/1987			<20			
FPT-03	02/25/1987			<20			
FPT-03	03/26/1987			<20			
FPT-03	04/20/1987			<20			
FPT-03	05/19/1987			<20			
FPT-03 FPT-03	05/20/1987			<20 <20	1		
FPT-03	06/16/1987 07/22/1987			<20			
FPT-03	08/24/1987			<20			
FPT-03	09/23/1987			<20			
FPT-03	10/20/1987			<20			
FPT-03	11/13/1987			<20			
FPT-03	12/18/1987			40			
FPT-03	01/19/1988			<20			
FPT-03	02/18/1988			<20			
FPT-03	03/21/1988			<20			
FPT-03	04/25/1988			<20			
FPT-03	05/23/1988			<20			
FPT-03	06/24/1988			<20			
FPT-03	07/20/1988			<20			
FPT-03	08/24/1988			<20			
FPT-03	09/19/1988			<20			
FPT-03	10/25/1988			<20			
FPT-03	11/21/1988			<20			
FPT-03	12/29/1988			<20			
FPT-03	01/26/1989			<20			
FPT-03	02/20/1989			<20			
FPT-03	03/21/1989			<20			
FPT-03	04/27/1989			<20			
FPT-03	05/22/1989			<20			

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SITE	DATE	Arsenic Dissolved	Chromium	Chromium	Manganese	Calcium Dissolved	Sulfate			
SHE	DATE	Dissolveα (μg/i)	(Hexavalent) (μg/l)	Dissolved (μg/l)	Dissolved (μg/l)	(mg/L)	(mg/L)			
FPT-03	06/28/1989			<20			······································			
FPT-03	07/25/1989			<20						
FPT-03	08/29/1989		··	<20						
FPT-03	09/22/1989	-	· ·	<20	•					
FPT-03	10/26/1989			<20						
FPT-03	11/21/1989			<20		i				
FPT-03	12/20/1989			<20						
FPT-03	01/22/1990			<20		_				
FPT-03	02/21/1990			<20		_				
FPT-03	03/21/1990			<20						
FPT-03	04/24/1990			<20						
FPT-03	05/23/1990	-		<20						
FPT-03	06/22/1990			<20			-			
FPT-03	07/25/1990			<20						
FPT-03	08/23/1990			<20						
FPT-03	09/24/1990			<20						
FPT-03	10/23/1990	 ;=		<20						
FPT-03	11/26/1990	-		<20						
FPT-03	12/26/1990			<5						
FPT-03	01/23/1991		<u> </u>	<5			-			
FPT-03	02/25/1991			<5						
FPT-03	03/26/1991			<5		-				
FPT-03	04/26/1991			<5						
FPT-03	05/28/1991	- 34.40		ح.						
FPT-03	06/25/1991	<u></u>	. 	<5						
FPT-03	07/29/1991			<5						
FPT-03 FPT-03	08/26/1991			্ট ব্য						
FPT-03	09/27/1991 10/24/1991	-		9						
FPT-03	11/25/1991			্ত ত						
FPT-03	12/23/1991			্ত ক						
FPT-03	01/15/1992			<5	***					
FPT-03	02/15/1992			6						
FPT-03	03/15/1992		<u>-</u>	5						
FPT-03	04/15/1992			<5						
FPT-03	05/15/1992			<5						
FPT-03	06/15/1992			<						
FPT-03	07/15/1992			11						
FPT-03	08/15/1992		—	18						
FPT-03	09/15/1992		·	<5						
FPT-03	10/15/1992			<5						
FPT-03	11/15/1992			< 5		_				
FPT-03	12/15/1992	<u></u>	<u></u>	<5	-					
FPT-03	01/15/1993			<5						
FPT-03	02/15/1993			<5						
FPT-03	03/15/1993	:	·	<5 		_				
FPT-03	04/15/1993			12	- 1	_	-			
FPT-03	05/15/1993		. —	7.8	- 1	_				
PT-03	06/15/1993		_	<5	-		-			
PT-03	07/15/1993			<5						
PT-03	08/15/1993	_		্						
FPT-03 FPT-03	09/15/1993	_		<5						
PT-03 PT-03	10/15/1993			<5 .s	•••		-			
·P1-03 ·PT-03	11/15/1993 12/15/1993			<5 <5			-			
PT-03 PT-03	01/15/1993			<5						
·PT-03	01/15/1994	_		<5 <5						
PT-03	02/15/1994	_		7.3						
-PT-03	05/15/1994			7.3 <5	 					
PT-03	03/13/1994			< ব						
PT-03	11/15/1994			6.6						
PT-03	02/15/1995			9.5	<u></u>					
PT-03	05/15/1995			<i>5.3</i> <5						
₽T-03	12/15/1996	ব			1					
PT-03	07/15/1997	હ								

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***************************************		Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	
		(µg/l)	(μg/l)	(μg/l)	(µg/l)	(m g/ L)	(m g/ L)
FPT-03	01/15/1998			6.9			***
FPT-03	02/15/1998			9.6			
FPT-03	03/15/1998			24			
FPT-03	04/15/1998			16			
FPT-03	05/15/1998		•	17			
FPT-03	06/15/1998			79			
FPT-03	07/15/1998	•••		<5			•••
FPT-03	08/15/1998			12			
FPT-03	09/15/1998			<5 15			
FPT-03 FPT-03	10/15/1998 11/15/1998			15			
FPT-03	12/15/1998			<5 7.5			
FPT-03	01/30/1999			9.4			
FPT-03	02/27/1999			9. 4 <5			
FPT-03	03/20/1999			27			
FPT-03	04/24/1999	***		24			
FPT-03	05/17/1999			13			
FPT-03	06/19/1999			9.3			
FPT-03	07/26/1999			9.3 6.4			
FPT-03	12/10/1999	<10		18	<10	23	46
FPT-03	06/26/2000	<10		<10	58	28	<1000
FPT-03	10/04/2000	<10		<10	42	21	64.45
							011.10
FPT-04	06/16/1983			270			
FPT-04	10/04/1983	20	<5	14			
FPT-04	12/08/1983		160	200			
FPT-04	01/24/1984		20	<20			
FPT-04	03/01/1984	<20		<4		***	
FPT-04	03/21/1984		37	27			
FPT-04	01/30/1985		_	40			•••
FPT-04	05/03/1985			<20			
FPT-04	08/01/1985		_	<20			
FPT-04	10/31/1985			<20			
FPT-04	02/13/1986			<20			
FPT-04	05/01/1986			<20			
FPT-04	08/13/1986			<20			
FPT-04	07/22/1987			<20			
FPT-04	10/20/1987			<20			
FPT-04	01/19/1988			<20	1		•
FPT-04	04/25/1988	•••		<20			
FPT-04	07/20/1988		-	<20			
FPT-04	10/25/1988			<20)		
FPT-04	01/26/1989			<20			
FPT-04	04/27/1989			<20	1		
FPT-04	07/25/1990			<20			
-PT-04	10/23/1990			<20			
FPT-04	12/26/1990	•••		<5			•••
PT-04	01/23/1991			<5			
PT-04	04/26/1991	-		<5			
-PT-04	07/29/1991			<5			-
PT-04	10/24/1991	-		<5			
PT-04	01/15/1992		-	<5	•		
PT-04	04/15/1992			<5			
PT-04	07/15/1992			<5			•••
PT-04	10/15/1992			<5			
PT-04	01/15/1993		_	<5			
PT-04	04/15/1993			<5			
PT-04	07/15/1993			<5			
PT-04	10/15/1993			<5			
PT-04	01/15/1994			<5	[
PT-04	05/15/1994			<5		_	
PT-04	05/15/1995			<5			
PT-04	01/15/1998			5.1			
-PT-04	05/15/1998			<5			
PT-04	12/10/1999	<10		<10	95	24	48

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SITE	DATE	Arsenic Dissolved	Chromium (Hexavalent)	Chromium Dissolved	Manganese Dissolved	Calcium Dissolved	Sulfate
		(μg/I)	(µg/1)	(μ g/ l)	(μg/l)	(m g/L)	(m g/L)
PT-04	10/04/2000	<10		<10	65	21	69.87
TVT 0.5	0411411003	_		75			
PT-05 PT-05	06/16/1983 08/13/1983	7 4	580	75 62 0		_	-
PT-05	10/04/1983	4	-5 -5	<5			
PT-05	12/08/1983	-	900	900			_
PT-05	01/06/1984		20	200			
PT-05	01/18/1984	10	360	510	-		
PT-05	01/24/1984	***	450	590			
PT-05	02/01/1984		200	400			
PT-05	03/01/1984	<4	<20	<20			
PT-05	03/21/1984	40 .	340	400	-		
PT-05	04/02/1984	<4	<20	40	_		-
PT-05	12/04/1984		20	20			
PT-05 PT-05	01/03/1985		100	100 160			
PT-05	01/30/1985 03/01/1985			270	_		
PT-05	04/01/1985	-		270			
PT-05	05/03/1985			<20			
PT-05	07/02/1985		_	<20			
PT-05	08/01/1985		_	<20			
PT-05	09/09/1985		_	<20			
PT-05	10/01/1985			<20			
PT-05	10/31/1985			<20			
PT-05	12/04/1985			<20			
PT-05	01/20/1986			<20			
PT-05	02/13/1986			<20			
PT-05	03/14/1986			<20		I	
PT-05 PT-05	05/01/1986 08/13/1986			<20 <20		_	
PT-05	09/03/1986			<20 <20			
PT-05	10/06/1986			<20			
PT-05	12/03/1986		_	<20			
PT-05	01/05/1987			<20			
PT-05	02/25/1987			<20			
PT-05	03/26/1987			<20			
PT-05	04/20/1987			<20			
PT-05	05/19/1987			<20			-
PT-05	05/20/1987			<20			
PT-05	06/16/1987			<20		-	
PT-05 PT-05	07/22/1987			<20 <20		_	_
PT-05	08/24/1987 09/23/1987	 .		<20 <20		_	_
PT-05	10/20/1987			<20			
PT-05	11/13/1987			<20			
PT-05	12/18/1987			<20			
PT- 0 5	01/19/1988			<20			
PT-05	02/18/1988			<20			
PT-05	03/21/1988			<20		-	_
PT-05	04/25/1988	*** .		<20		_	
PT-05	05/23/1988			<20		-	_
PT-05	06/24/1988			<20 <20		_	
PT-05 PT-05	07/20/1988 08/24/1988			<20 <20			-
PT-05	09/19/1988			<20 <20			_
PT-05	10/25/1988	•••		<20 <20			
PT-05	11/21/1988			<20			
PT-05	12/28/1988			<20			
PT-05	01/26/1989			<20			
PT-05	02/20/1989			<20			
PT-05	03/21/1989			<20			
PT-05	04/27/1989			<20			
PT-05	05/22/1989			<20			
PT-05	06/28/1989			<20			_
PT-05	07/25/1989			<20			

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		Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	
]	(μg/l)	(μ g/ l)	(µg/l)	(μ g/ l)	(mg/L)	(mg/L)
FPT-05	08/29/1989			<20			
FPT-05	09/22/1989			<20			
FPT-05	10/26/1989			<20			
FPT-05	11/21/1989			<20			
FPT-05	12/20/1989			<20			
FPT-05	01/22/1990			<20			
FPT-05	02/21/1990			<20			***
FPT-05	03/21/1990			<20			
FPT-05	04/24/1990			<20			
FPT-05	05/23/1990			<20			
FPT-05	06/22/1990			<20			
FPT-05	07/25/1990			<20	•		
FPT-05	08/23/1990			<20			-
FPT-05	09/24/1990			<20			
FPT-05	10/23/1990		**-	<20			
07	17/07/100/			£900			
HL-07	12/03/1986			5800			**-
HL-07	01/05/1987			4700			
HL-07	02/25/1987			4400			
HL-07	03/27/1987 04/20/1987			5300			
HL-07 HL-07	04/20/1987			4900 6300		***	
HL-07 HL-07	05/19/1987			6300 6300			
HL-07	06/16/1987			5900			
HL-07	07/21/1987			3800			
HL-07	08/24/1987		_	6500			
HL-07	09/23/1987			8100			
HL-07	10/20/1987		***	5500			
HL-07	11/13/1987			3400			
HL-07	12/18/1987			3400			
HL-07	01/20/1988			5100			
HL-07	02/18/1988			5800			
HL-07	03/21/1988			8400			
HL-07	04/22/1988			2800	!		
HL-07	05/23/1988			3600			
HL-07	06/23/1988			4600			
HL-07	07/19/1988			4300			
HL-07	08/24/1988			4900			
HL-07	09/19/1988			5300			
HL-07	10/24/1988			5500		***	
HL-07	11/21/1988	•	•••	5200]		
HL-07	12/23/1988			5000			
HL-07	01/25/1989			6800			
HL-07	02/20/1989			4700			
HL-07	03/21/1989			4900			
HL-07	04/28/1989			6000			
HL-07	05/22/1989			3700			erere
HL-07	06/28/1989			4800			
HIL-07	07/26/1989			4100			
HL-07	08/29/1989			6100			
HL-07	09/22/1989			5500			
HL-07	10/25/1989			4500			
HL-07	11/21/1989			5400			
HL-07	12/21/1989			9300			
HL-07	01/23/1990			4500			
HL-07	02/21/1990			4300			
HL-07	03/21/1990	*		2940			
HL-07	04/23/1990		•••	3100			
HL-07	05/23/1990			3500			
HL-07	06/22/1990	***		3290			
HL-07	07/25/1990			3270			
HL-07	08/24/1990			4750			
		4		7570	[
HL-07 HL-07	09/20/1990 10/23/1990			6260			

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······································		Arsenic	Chromium	Chromium	Manganese	Calcium	Sulfate
SITE	DATE	Dissolved	(Hexavalent)	Dissolved	Dissolved	Dissolved	
	<u> </u>	(μ g/ 1)	(μg/l)	(μg/l)	(μg/l)	(m g/L)	(mg/L)
¶L-07	01/23/1991			5000		_	
-TL-07	04/26/1991			4380			
HL-07	07/29/1991			3030			
HL-07	10/24/1991		_	4520			
-IL-07	01/15/1992		_	1940			_
HL-07	04/15/1992			1290			
IL-07	07/15/1992			4200			
-TL-07	10/15/1992			4800			
IL-07	01/15/1993			2100			
HL-07	04/15/1993		-	12200			•
IL-07	07/15/1993			5600			
1L-07	10/15/1993			5130			
-1L-07	01/15/1994			4220			
IL-07	05/15/1994			15600			
IL-07	08/15/1994	•	_	5400			
IL-07	11/15/1994			12800			
łL-07	02/15/1995			1830			
IL-07	05/15/1995			23000			
TL-07	07/15/1995	15500					
IL-07	01/15/1998			2800			
IL-07	02/15/1998			450			•••
IL-07	05/15/1998			2000			
IL-07	08/15/1998			3100			
IL-07	10/15/1998			3000		_	
IL-07	12/15/1998			1700			
IL-07	01/30/1999			2100			_
IL-07	02/27/1999			1000			
IL-07	05/17/1999		***	2600			
IL-07	09/11/1999	<		2300	<30	16	
IL-07	10/22/1999	~		-9		30	94
IL-07	11/19/1999	<10		110	600	1.6	64
L-07	12/21/1999	<10		<50	550	400	176
IL-07	01/21/2000	32		<10	970	91	3
IL-07	02/14/2000	29		<10	1580	102	265
IL-07	03/14/2000	<10		<10	2400	54	221
IL-07	04/08/2000	<10		<10	1000	133	391.99
IL-07	05/20/2000	<10		<10	1900	96	4
IL-07	06/17/2000	<10		<10	2600	200	635
IL-07	07/17/2000	50		<10	4200	130	320.5
IL-07	08/15/2000	<10		10	3200	270	77.95
IL-07	09/15/2000	<10		<10	2900	190	662.49
IL-07	10/04/2000	<10		<10	2500	160	496.47
IL-07	11/14/2000	<10		<10	3600	170	481.07
IL-07	12/07/2000	<10	-	<10	2900	140	416.21